

DESCRIPTION

Recessed medium distribution LED open downlight luminaire with 4 inch square aperture utilizing a LED array. Modular platform can be reconfigured from below the ceiling to accept a broad range of lamp modules and optical elements. Platform is suitable for 2x6 residential or shallow plenum commercial applications. Insulation must be kept 3" from top and sides of housing. Platform + module + element combination produces square distribution with excellent light control and low aperture brightness.

Catalog #		Type
Project		
Comments		Date
Prepared By		

SPECIFICATION FEATURES

Frame

Galvanized steel plaster frame with integral bar hanger receivers. Setscrews provide positive horizontal locking.

Collar

Matte black aluminum collar adjusts vertically for 1/2" - 1" thick ceilings and can be rotated ± 75° thru the aperture. Integral gun sights facilitate the use of guide strings or laser lines. Shipped with a paint overspray protector.

Housing

Steel housing painted matte black for a visually dark interior. Removable hinged cover allow for top access. All fasteners are captive.

Bar Hangers

Captive preinstalled bar hangers adjust from 8-1/2" to 24" wide; pass thru allows shortening without removal. Captive nail penetrates standard and engineered lumber. Mounting flange levels platform with ceiling. Integral clip attaches direction to tee grid.

Universal Mounting Bracket

Accepts 1/2" EMT, C channel and bar hangers and adjusts 3" vertically from above the ceiling.

Gaskets

Closed cell gaskets achieve restrictive airflow requirements without additional caulking.

Lamp Module

Integral mounting clips facilitate installation from top access or thru the aperture. Locking screws (provided) lock lamp module to the housing. Electrical quick disconnect facilitates installation and field service.

LED Array

Field interchangeable and upgradable light engine provides a uniform source with high efficiency and no pixilation. Available in remote or proximity phosphors in various color temperatures. Select color rendering index (CRI) of 90, 95 or 97 minimum providing excellent color quality. Color accuracy within 2 SDCM.

Primary Reflector

Segmented Miro® upper reflector yields a smooth square beam with uniform distribution. Diffuse glass mixing dome provides shielding to source and excellent color over angle uniformity over rated life.

Lower Reflector

Aluminum parabolic reflector provides for 55° cutoff and is available in a wide range of specular and semi specular Alzak finishes. Corrugated baffle option provides additional brightness control. Available in self-flanged or metal trim ring versions. May be installed rimless with optional rimless adapter.

Trim Retention

Mousetrap type springs pull flange tight to ceiling. Light trap eliminates spill light at edge of flange and reflector.

Junction Box

(7) 1/2" trade size pry outs, (3) non-metallic cable. Listed for (8) #12 AWG (four in, four out) 90°C conductors and feed thru branch wiring. Wago® quick connects for field wiring.

Driver

Integral 120 or 120-277V 50/60 Hz constant current driver provides noise free operation. Continuous, flicker-free leading or trailing edge phase cut dimming from 100 to 1% with select controls.

Compliance

cULus listed for damp locations. UL1598 wet location labeled, covered ceiling mount only. Restrictive airflow per ASTM E283. EMI/RFI emissions per FCC 47CFR Part 15 class B limits and suitable for residential and commercial use. Contains no mercury or lead and RoHS compliant. Zhaga certified luminaire. Photometric testing in accordance with IES LM79. LED life testing in accordance with LM80.

Warranty

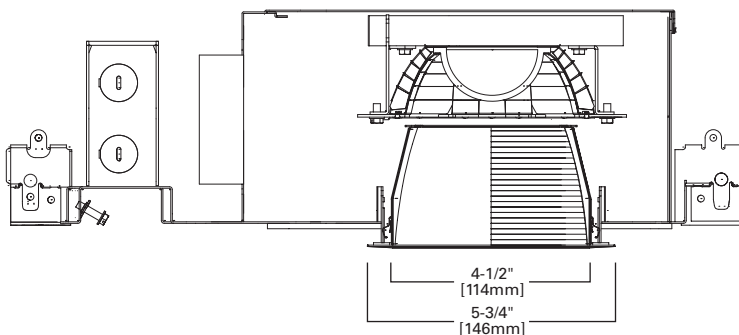
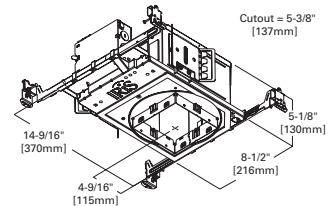
5 year warranty.



P406TAT MH4LED E4DL

Medium Distribution
LED Open Downlight

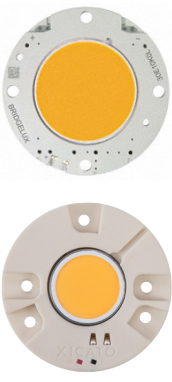
4-Inch Square Aperture



Refer to ENERGY STAR® Qualified Products List. Can be used to comply with California Title 24 High Efficacy requirements. Certified to California Title 20 Appliance Efficiency Database.



Cooper Lighting Solutions is a founding member of the Zhaga Consortium

Delivered Performance		V927	V930	V935	V940	D927	D930	A927	A930	
	CRI (Min)	90	90	90	90	97	97	95	95	
	R9 (Min)	50	50	50	50	95	95	90	90	
	CCT (K5)	2700	3000	3500	4000	2700	3000	2700	3000	
	SDCM	2-Step								
	Life (L70)	50,000 Hours							40,000 Hours*	
	LPW**	52	55	61	68	41	44	41	44	
Lumens	15W	748	794	871	980	593	638	597	637	
	20W	1015	1078	1182	1330	805	881	810	864	
	33W	1652	1721	1815	2123	1236	1352	1243	1326	
Performance data based on goniometer measurements with 'E' driver option and E4DLH lower shielding reflector. *Projected lumen maintenance. **LPW based on 15W and 'E' driver option.										

ORDERING INFORMATION

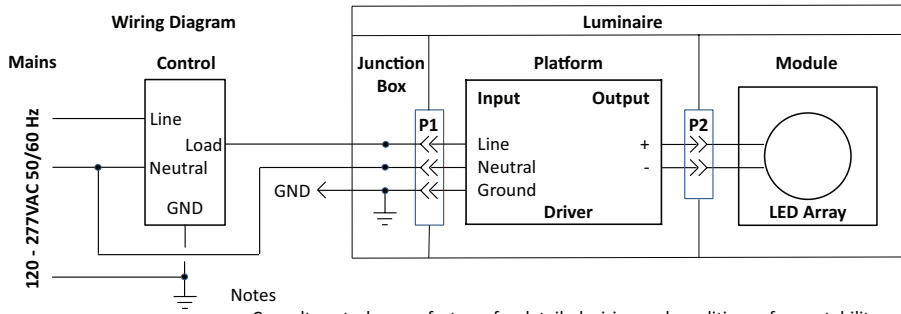
(Order housing platform, lamp module and optical element separately)

Platform	Accessories
<p>P406TAT = 4" square housing platform, non-IC, airtight P406TCP = 4" square housing platform, non-IC, CCEA listed for City of Chicago plenum requirements</p>	<p>RA4X4 = Rimless adapter for 4" housing platforms EDC4X41 = Extended depth collar for 1" - 1-1/2" thick ceilings</p>

Lamp Module	Wattage	Light Engine	Driver
<p>MH4LED = 4" square LED module</p>	<p>15 = 15 Watts 20 = 20 Watts 33 = 33 Watts</p>	<p>V927 = Bridgelux Vero Series, Zhaga certified, 90 CRI min, 2700 K CCT V930 = Bridgelux Vero Series, Zhaga certified, 90 CRI min, 3000 K CCT V935 = Bridgelux Vero Series, Zhaga certified, 90 CRI min, 3500 K CCT V940 = Bridgelux Vero Series, Zhaga certified, 90 CRI min, 4000 K CCT D927 = Bridgelux Décor Series, Zhaga certified, 97 CRI min, 2700 K CCT D930 = Bridgelux Décor Series, Zhaga certified, 97 CRI min, 3000 K CCT A927 = Xicato XTM Artist Series, Zhaga compatible, 95 CRI min, 2700 K CCT A930 = Xicato XTM Artist Series, Zhaga compatible, 95 CRI min, 3000 K CCT</p>	<p>E = 120 - 277V 50/60 Hz LE/TE phase cut dimming to 1% (dimming at 120V input only, available in 15 and 20 watt only) 1ELTE = 120V 60 Hz LE phase cut dimming to 1%, Lutron A-Series</p>

Element	Texture	Finish	Flange Style	Accessories	
<p>E4DL = 4" Open Reflector</p>	<p>[Blank] = Smooth CB = Corrugated Baffle</p>	<p>Alzak Finishes LI = Clear Low Iridescent H = Clear Haze G = Champagne Gold WMH = Warm Haze WH = Wheat WHH = Wheat Haze GP = Graphite GPH = Graphite Haze K = Cognac</p>	<p>KH = Cognac Haze CC = Chocolate CCH = Chocolate Haze B = Black</p> <p>Painted Finishes MB = Matte Black MW = Matte White W = Gloss White</p>	<p>[Blank] = Metal Trim Ring, Matte White SF = Self-Flanged SFWF = Self-Flanged, Matte White Painted Flange (not available with corrugated baffle) RL = Rimless, Use with Rimless Adapter</p>	<p>L4X4HEX = Matte Black Hex Cell Louver MTR4MW = 4" Metal Trim Ring, Matte White MTR4MB = 4" Metal Trim Ring, Matte Black MTR4SN = 4" Metal Trim Ring, Satin Nickel MTR4TBZ = 4" Metal Trim Ring, Tuscon Bronze</p>

WIRING DIAGRAM



- Notes
- Consult controls manufacturer for detailed wiring and conditions of acceptability
 - Input voltage contingent on control and driver options selected
 - Field wiring to confirm to all national and local codes
 - Phase cut dimming at 120V input only.

ENERGY

ENERGY DATA			
E = LE & TE Phase Cut			
Input Voltage		120V	277V
15W	Input Power (W)	14.4	15.4
	Input Current (A)	0.121	0.059
	Inrush (A)	0.16	0.288
20W	Input Power (W)	21.2	21.8
	Input Current (A)	0.178	0.082
	Inrush (A)	0.218	0.403
T Ambient -40 - +40°C			
Power Factor ≥ 0.90			
Sound Rating Class A			
THD ≤ 20%			

COMPATIBLE CONTROLS

Manufacturer	Series	Model	15W				LE Start Time	20W				LE Start Time
			Minimum Luminaires (per Circuit)	Maximum Luminaires (per Circuit)	Minimum Measured Light Output	Maximum Measured Light Output		Maximum Luminaires (per Circuit)	Minimum Measured Light Output (per Circuit)	Maximum Measured Light Output	Minimum Luminaires	
Lutron	Ariadni	AY-600P	1	37	9%	98%	<1s	1	27	11%	98%	<1s
Lutron	Contour	CT103P	1	62	1%	98%	>1s	1	45	4%	98%	<1s
Lutron	Contour	CT-600P	1	37	1%	98%	>1s	1	27	3%	98%	<1s
Lutron	Rotary	D-600P	1	37	1%	98%	>1s	1	27	3%	98%	>1s
Lutron	Diva	DV-600P	1	37	1%	98%	>1s	1	27	2%	98%	<1s
Lutron	Glyder	GL-600P	1	37	2%	99%	<1s	1	27	7%	98%	<1s
Lutron	Lumia	LG-600PH	1	37	1%	98%	>1s	1	27	1%	98%	>1s
Lutron	Nova	N-600	1	37	0%	99%	>1s	1	27	1%	99%	<1s
Lutron	Skylark	S-600P	1	37	1%	98%	>1s	1	27	1%	98%	>1s
Lutron	Centurion	C-600P	1	37	3%	99%	>1s	1	27	5%	99%	>1s
Lutron	Ariadni	AYLV-600P	1	28	4%	98%	<1s	1	20	9%	98%	<1s
Lutron	Glyder	GLV600	1	28	1%	99%	<1s	1	20	3%	99%	<1s
Lutron	Diva	DVLV-600P	1	28	2%	97%	<1s	1	20	6%	98%	<1s
Lutron	Lumina	LG-103P	1	62	5%	98%	<1s	1	45	10%	98%	<1s
Lutron	Skylark	SLV-600P	1	28	1%	98%	>1s	1	20	3%	98%	>1s
Lutron	Nova	NTLV600	1	28	9%	99%	<1s	1	20	12%	99%	<1s
Lutron	Nova	NT600	1	37	2%	99%	>1s	1	27	4%	99%	>1s

COMPATIBLE CONTROLS

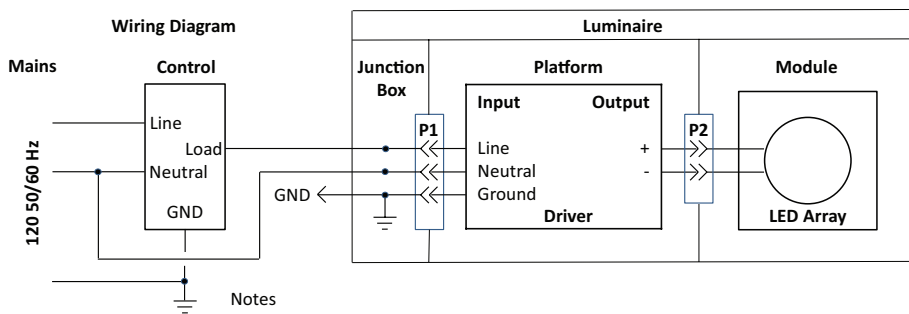
Manufacturer	Series	Model	15W		Minimum Measured Light Output	Maximum Measured Light Output	LE Start Time	20W		Minimum Measured Light Output	Maximum Measured Light Output	LE Start Time
			Minimum Luminaires (per Output)	Maximum Luminaires (per Output)				Minimum Luminaires (per Output)	Maximum Luminaires (per Output)			
Lutron	Maestro	MACL-153M()*	1	10	20%	98%	<1s	-	-	-	-	-
Lutron	Maestro Wireless	MRF2-6ND	1	10	20%	99%	>1s	1	7	19%	100%	>1s
Lutron	Maestro Wireless	MRF2-6ELV	-	-	-	-	-	1	7	19%	100%	>1s
Lutron	RadioRA2 1000 W	RRD-10ND	1	10	20%	99%	>1s	1	7	19%	100%	>1s
Lutron	RadioRA2 Adaptive Dimmer	RRD-6NA	-	-	-	-	-	1	7	19%	100%	>1s
Lutron	HomeWorks QS 600 W	HQRD-6ND	1	10	20%	99%	>1s	1	7	19%	100%	>1s
Lutron	HomeWorks QS 1000 W	HQRD-10ND	1	10	20%	99%	>1s	1	7	19%	100%	>1s
Lutron	HomeWorks QS Adaptive Dimmer	HQRD-6NA	-	-	-	-	-	1	7	19%	100%	>1s
Lutron	HomeWorks 600 W Dimmer	HxD-6ND	1	23	19%	99%	>1s	1	15	20%	99%	>1s
Lutron	"Grafik Eye 3000/ HomeWorks"	"Grafik Eye 3000 Family/ HWI-WPM-6D-120"	1	35	20%	98%	>1s	1	22	20%	100%	>1s
Lutron	"Grafik QS/ Wallbox Power Module"	"Grafik Eye QS Main Unit Family/ LQRJ-WPM-6P"	1	35	20%	98%	>1s	1	22	20%	100%	>1s
Lutron	RPM-4U Module (LCP, HomeWorks,	HW-RPM-4U-120,	1	86	20%	96%	>1s	1	55	18%	97%	>1s
	GRAFIK Systems, Quantum)	LP-RPM-4U-120										
Lutron	RPM-4A Module (LCP, HomeWorks,	HW-RPM-4A-120,	1	53	19%	99%	>1s	1	34	19%	98%	>1s
	GRAFIK Systems, Quantum)	LP-RPM-4A-120										
Lutron	Panel module	GP (Harrier) Card	-	-	-	-	-	1	50	19%	97%	>1s
Lutron	Stanza	SZ-6ND	1	23	19%	99%	>1s	1	15	20%	99%	>1s
Lutron		"PHPM-PA with Grafik Eye QS Main Unit"	1	71	19%	98%	>1s	1	55	20%	99%	>1s
Lutron		"PHPM-WBX with 3-wire fluorescent control"	1	71	19%	98%	>1s	1	55	20%	99%	>1s

COMPATIBLE CONTROLS

Manufacturer	Series	Model	15W		Maximum Measured	Minimum Measured	LE Start Time	20W		Maximum Measured	Minimum Measured	LE Start Time
			Minimum Luminaires (per circuit)	Maximum Luminaires (per circuit)				Minimum Luminaires	Maximum Luminaires			
Vantage	Enclosure Module	SDM12 EM	1	25	96.1%	1.7%	3.4s	1	17	95.9%	0.2%	5s
Vantage	Enclosure Module	EDIMMOD	1	37	98.8%	3.8%	2.4s	1	25	95.8%	4.9%	1.9s
Vantage	ScenePoint	DS / RD	1	8	96.1%	1.7%	3.4s	1	7	95.9%	0.2%	5s
Vantage	RFLC	DRD4	1	8	100%	6.3%	2.3s	1	7	100%	8.4%	1.9s
Crestron	Green Light	GLX-DIM6	--	--	100%	15%	--	--	--	100%	9%	--
Crestron	Green Light	GLXX-2DIM8	--	--	100%	15%	--	--	--	100%	9%	--
Crestron	Green Light	CLS-EXP-DIMU	--	--	100%	8%	--	--	--	100%	11%	--
Crestron	Green Light	DIN-1DIM4	--	--	100%	6%	--	--	--	100%	7%	--
Crestron	Green Light	DIN-1DIMU4	--	--	100%	14%	--	--	--	100%	9%	--
Savant		LMD-4120	--	--	100%	3.5%	<1s	--	--	100%	2.7%	<1s
Savant		LMD-8120	--	--	100%	10.1%	<1s	--	--	100%	10.4%	<1s
Savant		LMD-IN120	--	--	100%	3.5%	<1s	--	--	100%	3.1%	<1s

Manufacturer	Series	Model	15W		Maximum Measured	Minimum Measured	LE Start Time	20W		Maximum Measured	Minimum Measured	LE Start Time
			Minimum Luminaires (per circuit)	Maximum Luminaires (per circuit)				Minimum Luminaires	Maximum Luminaires			
CWD	Ilumen	SC277-06-UN	1	38	100%	13%	<1s	1	28	99.40%	16.58%	<1s
CWD	Aspire	9530AW	1	30	100%	5%	<1s	1	21	100.00%	13.07%	<1s
CWD	Skye	DE06P	1	30	98%	11%	<1s	1	21	96.78%	14.81%	<1s
CWD	Devine	RI061	1	30	99%	21%	>1s	1	21	98.81%	24.23%	>1s
CWD	Devine	TAL06P	1	37	100%	10%	<1s	1	27	99.22%	11.91%	<1s
CWD	Toggle	DAL06P	1	37	100%	4%	<1s	1	27	99.16%	5.66%	<1s
CWD	Skye	SAL06P	1	37	100%	9%	<1s	1	27	99.16%	13.00%	<1s
CWD	Skye	SLC06P	1	37	99%	2%	>1s	1	27	98.27%	1.76%	>1s
CWD	Devine	DLC06P	1	18	99%	2%	>1s	1	13	98.57%	3.09%	<1s
CWD	Toggle	TI061	1	30	97%	5%	<1s	1	21	96.36%	12.58%	<1s
CWD	Smart	AAL06	1	37	99%	10%	<1s	1	27	98.51%	13.33%	<1s

WIRING DIAGRAM



Notes

- Consult controls manufacturer for detailed wiring and conditions of acceptability
- Input voltage contingent on control and driver options selected
- Field wiring to confirm to all national and local codes

ENERGY

ENERGY DATA		
1ELTE = LE Phase Cut		
Input Voltage	120V	
15W	Input Power (W)	16.3
	Input Current (A)	0.14
	Inrush (A)	1.128
20W	Input Power (W)	23.2
	Input Current (A)	0.195
	Inrush (A)	1.112
33W	Input Power (W)	33.7
	Input Current (A)	0.283
	Inrush (A)	0.072
T Ambient -40 - +40°C		
Power Factor ≥ 0.90		
Sound Rating Class A		
THD ≤ 20%		

COMPATIBLE CONTROLS

Manufacturer	Series	Model	15W		Maximum Measured	Minimum Measured	LE Start Time	20W		Maximum Measured	Minimum Measured	LE Start Time	33W		Maximum Measured	Minimum Measured	LE Start Time
			Minimum Luminaires	Maximum Luminaires				Minimum Luminaires	Maximum Luminaires				Minimum Luminaires	Maximum Luminaires			
Lutron	Nova T	NTLV-600-CPN0199	1	8	100%	1%	<1s	1	8	100%	1%	<1s	1	8	100%	1%	<1s
Lutron	Maestro Wireless	MRF2-6ND-120	1	8	100%	1%	<1s	1	8	100%	1%	<1s	1	8	100%	1%	<1s
Lutron	RadioRA2 1000 W	RRD-10ND	1	13	100%	1%	<1s	1	13	100%	1%	<1s	1	13	100%	1%	<1s
Lutron	RadioRA2 Adaptive Dimmer	RRD-6NA	1	8	100%	1%	<1s	1	8	100%	1%	<1s	1	8	100%	1%	<1s
Lutron	RadioRA 600 W	RA-6ND	1	8	100%	1%	<1s	1	8	100%	1%	<1s	1	8	100%	1%	<1s
Lutron	RadioRA 1000 W	RA-10ND	1	13	100%	1%	<1s	1	13	100%	1%	<1s	1	13	100%	1%	<1s
Lutron	HomeWorks QS 600 W	HQRD-6ND	1	8	100%	1%	<1s	1	8	100%	1%	<1s	1	8	100%	1%	<1s
Lutron	HomeWorks QS 1000 W	HQRD-10ND	1	13	100%	1%	<1s	1	13	100%	1%	<1s	1	13	100%	1%	<1s
Lutron	HomeWorks QS Adaptive Dimmer	HQRD-6NA	1	8	100%	1%	<1s	1	8	100%	1%	<1s	1	8	100%	1%	<1s
Lutron	HomeWorks QS WPM	HQRJ-WPM-6D-120	1	10	100%	1%	<1s	1	10	100%	1%	<1s	1	10	100%	1%	<1s
Lutron	HomeWorks 600 W Dimmer	HRD-6ND	1	8	100%	1%	<1s	1	8	100%	1%	<1s	1	8	100%	1%	<1s
Lutron	HomeWorks 1000 W dimmer	HWD-10ND, HRD-10ND	1	8	100%	1%	<1s	1	8	100%	1%	<1s	1	8	100%	1%	<1s
	HomeWorks WPM	HWI-WPM-6D-120	1	10	100%	1%	<1s	1	10	100%	1%	<1s	1	10	100%	1%	<1s
Lutron	GRAFIK Eye QS	QSGR-, QSGRJ-	1	10	100%	1%	<1s	1	10	100%	1%	<1s	1	10	100%	1%	<1s
	GRAFIK Eye 3000	GRX-3100, GRX-3500	1	10	100%	1%	<1s	1	10	100%	1%	<1s	1	10	100%	1%	<1s
Lutron	RPM-4U Module (LCP, HomeWorks, GRAFIK Systems, Quantum)	HW-RPM-4U-120, LP-RPM-4U-120	1	26	100%	1%	<1s	1	26	100%	1%	<1s	1	26	100%	1%	<1s
	RPM-4A Module (LCP, HomeWorks, GRAFIK Systems, Quantum)	HW-RPM-4A-120, LP-RPM-4A-120	1	13	100%	1%	<1s	1	13	100%	1%	<1s	1	13	100%	1%	<1s
Lutron	GP Panels	Various	1	26	100%	1%	<1s	1	26	100%	1%	<1s	1	26	100%	1%	<1s
Lutron	Stanza	SZ-6ND	1	8	100%	1%	<1s	1	8	100%	1%	<1s	1	8	100%	1%	<1s
Lutron	"Ariadni® C•L® 250 W dimmer"	AYCL-253P-	1	8	100%	1%	<1s	1	8	100%	1%	<1s	1	8	100%	1%	<1s
Lutron	"Diva® C•L® 250 W dimmer"	DVCL-253P- S	1	8	100%	1%	<1s	1	8	100%	1%	<1s	1	8	100%	1%	<1s
		DVSCCL-253P	1	8	100%	1%	<1s	1	8	100%	1%	<1s	1	8	100%	1%	<1s

COMPATIBLE CONTROLS

Manufacturer	Series	Model	15W		Maximum Measured	Minimum Measured	LE Start Time	20W		Maximum Measured	Minimum Measured	LE Start Time	33W		Maximum Measured	Minimum Measured	LE Start Time
			Minimum Luminaires	Maximum Luminaires				Minimum Luminaires	Maximum Luminaires				Minimum Luminaires	Maximum Luminaires			
Vantage	Enclosure Module	SDM12 EM	1	21	95.1%	1.0%	1.90s	1	17	95.3%	1.0%	1.70s	1	17	98.7%	1.1%	1.7s
Vantage	Enclosure Module	EDIMMOD	1	31	95.8%	0.9%	1.90s	1	25	96.2%	1.0%	1.80s	1	30	95.8%	1.1%	2.2s
Vantage	ScenePoint	DS / RD	1	7	95.1%	1.0%	1.90s	1	4	95.3%	1.0%	1.70s	1	7	98.7%	1.1%	1.7s
Crestron	Green Light	GLX-DIM6	--	--	100%	1%	--	--	--	100%	1%	--	--	--	100%	1%	--
Crestron	Green Light	CLX-2DIM8	--	--	100%	1%	--	--	--	100%	1%	--	--	--	100%	1%	--
Crestron	Green Light	GLXX-2DIM8	--	--	100%	1%	--	--	--	100%	1%	--	--	--	100%	1%	--
Crestron	Green Light	CLS-EXP-DIM	--	--	100%	1%	--	--	--	100%	1%	--	--	--	100%	1%	--
Crestron	Green Light	CLS-C6	--	--	100%	1%	--	--	--	100%	1%	--	--	--	100%	1%	--
Crestron	Green Light	CLW-DIMEX	--	--	100%	1%	--	--	--	100%	1%	--	--	--	100%	1%	--
Crestron	Green Light	CLX-1DELV4	--	--	100%	1%	--	--	--	100%	1%	--	--	--	100%	1%	--
Crestron	Green Light	DIN-1DIMU4	--	--	100%	1%	--	--	--	100%	1%	--	--	--	100%	1%	--
Cooper Lighting Solutions	ilumin	SC277-06-UN-1P	1	38	99%	0%	>1s	1	28	99%	0%	<1s	1	17	100	1%	<1s
Savant	--	LMD-8120	--	--	100%	3.0%	<1s	--	--	100%	3.0%	<1s	--	--	100%	2%	<1s
Savant	--	LMD-IN120	--	--	100%	4.0%	<1s	--	--	100%	4.0%	<1s	--	--	100%	2%	<1s
Savant	--	WCD-101xx	--	--	100%	3%	<1s	--	--	100%	0.03	<1s	--	--	1	2%	<1s

FINISH MULTIPLIERS

	LI	H	G	WMH	WH	WHH	GP	GPH	K	KH	CC	CCH	B	MB	MW	W
[Blank] = Smooth	1.14	1	1.04	1.15	1.03	0.83	0.88	0.92	0.87	0.77	0.8	0.74	0.76	0.76	1.04	1.04
CB = Corrugated	1.12	0.98	1.02	1.13	1.01	0.81	0.86	0.90	0.85	0.75	0.78	0.73	0.74	0.74	1.02	1.02

LIGHTING FACTS

LED lighting facts
A Program of the U.S. DOE

Light Output (Lumens) **794**
Watts **14.5**
Lumens per Watt (Efficacy) **54.76**

Color Accuracy
Color Rendering Index (CRI) **90**

Light Color
Correlated Color Temperature (CCT) **3000 (Bright White)**

2700K 3000K 4500K 6500K

All results are according to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.

Visit www.lightingfacts.com for the Label Reference Guide.

Registration Number: F4QJ-XFOXYM (9/25/2015)
Model Number: P406TAT MH4LED15V930E E4DLH [Upgrade : 9/25/2015]
Type: Luminaire - Downlight

LED lighting facts
A Program of the U.S. DOE

Light Output (Lumens) **649**
Watts **14.6**
Lumens per Watt (Efficacy) **44.45**

Color Accuracy
Color Rendering Index (CRI) **97**

Light Color
Correlated Color Temperature (CCT) **3000 (Bright White)**

2700K 3000K 4500K 6500K

All results are according to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.

Visit www.lightingfacts.com for the Label Reference Guide.

Registration Number: F4QJ-88CZT2 (1/13/2015)
Model Number: P406TAT MH4LED15D930E E4DLH
Type: Luminaire - Downlight

LED lighting facts
A Program of the U.S. DOE

Light Output (Lumens) **630**
Watts **13.4**
Lumens per Watt (Efficacy) **47.01**

Color Accuracy
Color Rendering Index (CRI) **97**

Light Color
Correlated Color Temperature (CCT) **3000 (Bright White)**

2700K 3000K 4500K 6500K


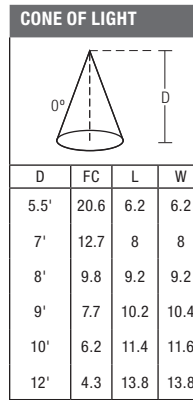
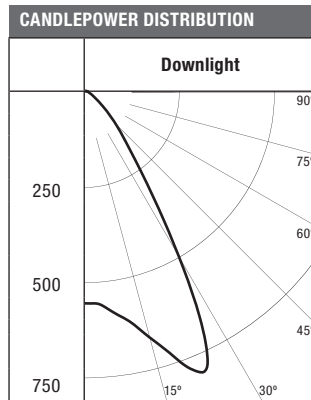
All results are according to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.

Visit www.lightingfacts.com for the Label Reference Guide.

Registration Number: F4QJ-VOD72L (1/13/2015)
Model Number: P406TAT MH4LED15A930E E4DLH
Type: Luminaire - Downlight

PHOTOMETRICS

Test Number	P128183
Platform	P406TAT
Element	MH4LED15V930E E4DLH
Lumens	794
Efficacy	55.2 Lm/W
SC	1.2

CANDELA TABLE

Degrees Vertical	Candela
0	549
5	558
15	661
25	754
35	256
45	99
55	34
65	16
75	4
85	2
90	0


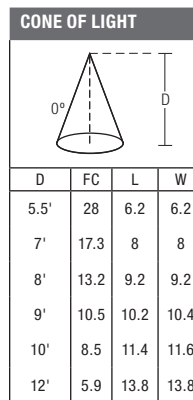
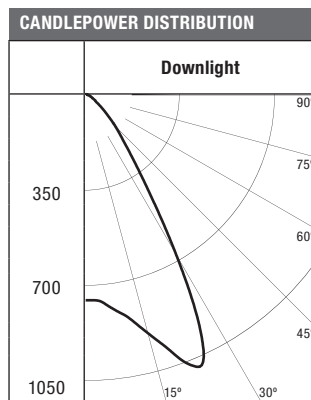
ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixture
0-30	517	65.1
0-40	678	85.3
0-60	773	97.4
0-90	794	100.0
90-180	0	0.0
0-180	794	100.0

COEFFICIENTS OF UTILIZATION

Ceiling Wall % RCR	80%				70%				50%	
	70	50	30	10	50	30	10	50	10	
Zonal cavity method -- floor reflectance = 20%										
0	119	119	119	119	116	116	116	111	111	
1	113	110	107	105	108	105	103	104	100	
2	107	101	97	93	99	95	92	96	90	
3	100	93	88	84	92	87	83	89	81	
4	95	86	80	76	85	80	75	83	74	
5	89	80	74	69	79	73	69	77	68	
6	84	75	68	63	74	68	63	72	63	
7	80	70	63	59	69	63	58	68	58	
8	76	65	59	54	65	58	54	63	54	
9	72	61	55	50	61	55	50	60	50	
10	68	57	51	47	57	51	47	56	47	

Test Number	P128185
Platform	P406TAT
Element	MH4LED20V930E E4DLH
Lumens	1078
Efficacy	50.6 Lm/W
SC	1.2

CANDELA TABLE

Degrees Vertical	Candela
0	744
5	757
15	897
25	1023
35	348
45	134
55	46
65	21
75	6
85	3
90	0

ZONAL LUMEN SUMMARY

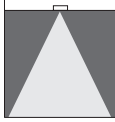
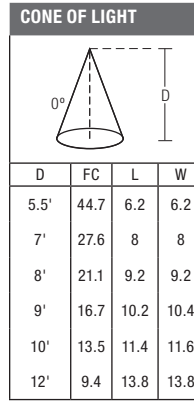
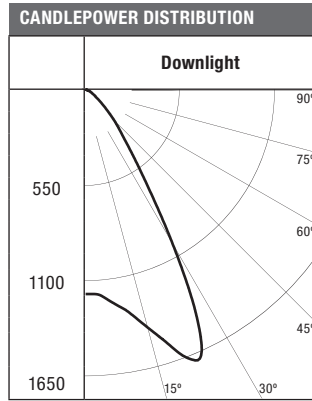
Zone	Lumens	%Fixture
0-30	702	65.1
0-40	920	85.3
0-60	1049	97.4
0-90	1078	100.0
90-180	0	0
0-180	1078	100.0

COEFFICIENTS OF UTILIZATION

Ceiling Wall % RCR	80%				70%				50%	
	70	50	30	10	50	30	10	50	10	
Zonal cavity method -- floor reflectance = 20%										
0	119	119	119	119	116	116	116	111	111	
1	113	110	107	105	108	105	103	104	100	
2	107	101	97	93	99	95	92	96	90	
3	100	93	88	84	92	87	83	89	81	
4	95	86	80	76	85	80	75	83	74	
5	89	80	74	69	79	73	69	77	68	
6	84	75	68	63	74	68	63	72	63	
7	80	70	63	59	69	63	58	68	58	
8	76	65	59	54	65	58	54	63	54	
9	72	61	55	50	61	55	50	60	50	
10	68	57	51	47	57	51	47	56	47	

PHOTOMETRICS

Test Number P167708
 Platform P406TAT
 Element MH4LED33V9301ELTE E4DLH
 Lumens 1721
 Efficacy 46.9 Lm/W
 SC 1.2

CANDELA TABLE

Degrees Vertical	Candela
0	1188
5	1209
15	1432
25	1633
35	555
45	214
55	73
65	34
75	10
85	5
90	0

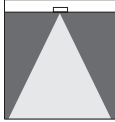
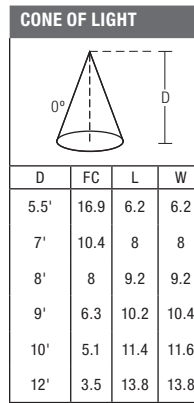
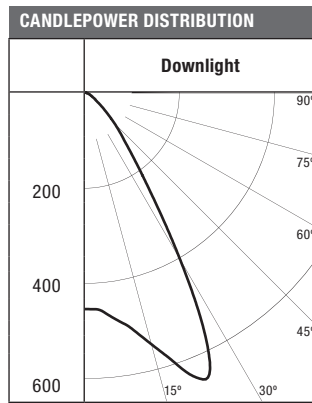
ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixture
0-30	1121	65.1
0-40	1468	85.3
0-60	1675	97.4
0-90	1721	100
90-180	0	0
0-180	1721	100

COEFFICIENTS OF UTILIZATION

Ceiling Wall % RCR	80%				70%				50%	
	70	50	30	10	50	30	10	50	10	
Zonal cavity method -- floor reflectance = 20%										
0	119	119	119	119	116	116	116	111	111	
1	113	110	107	105	108	105	103	104	100	
2	107	101	97	93	99	95	92	96	90	
3	100	93	88	84	92	87	83	89	81	
4	95	86	80	76	85	80	75	83	74	
5	89	80	74	69	79	73	69	77	68	
6	84	75	68	63	74	68	63	72	63	
7	80	70	63	59	69	63	58	68	58	
8	76	65	59	54	65	58	54	63	54	
9	72	61	55	50	61	55	50	60	50	
10	68	57	51	47	57	51	47	56	47	

Test Number P128184
 Platform P406TAT
 Element MH4LED15D930E E4DLH
 Lumens 649
 Efficacy 45.1 Lm/W
 SC 1.2

CANDELA TABLE

Degrees Vertical	Candela
0	448
5	456
15	540
25	616
35	209
45	81
55	28
65	13
75	4
85	2
90	0

ZONAL LUMEN SUMMARY

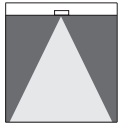
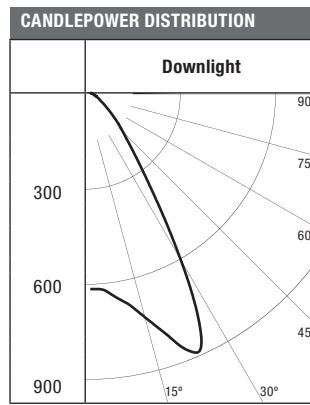
Zone	Lumens	%Fixture
0-30	423	65.1
0-40	554	85.3
0-60	632	97.4
0-90	649	100.0
90-180	0	0
0-180	649	100.0

COEFFICIENTS OF UTILIZATION

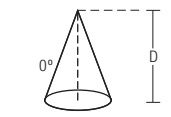
Ceiling Wall % RCR	80%				70%				50%	
	70	50	30	10	50	30	10	50	10	
Zonal cavity method -- floor reflectance = 20%										
0	119	119	119	119	116	116	116	111	111	
1	113	110	107	105	108	105	103	104	100	
2	107	101	97	93	99	95	92	96	90	
3	100	93	88	84	92	87	83	89	81	
4	95	86	80	76	85	80	75	83	74	
5	89	80	74	69	79	73	69	77	68	
6	84	75	68	63	74	68	63	72	63	
7	80	70	63	59	69	63	58	68	58	
8	76	65	59	54	65	58	54	63	54	
9	72	61	55	50	61	55	50	60	50	
10	68	57	51	47	57	51	47	56	47	

PHOTOMETRICS

Test Number	P128186
Platform	P406TAT
Element	MH4LED20D930E E4DLH
Lumens	881
Efficacy	41.4 Lm/W
SC	1.2

CONE OF LIGHT



D	FC	L	W
5.5'	22.9	6.2	6.2
7'	14.1	8	8
8'	10.8	9.2	9.2
9'	8.5	10.2	10.4
10'	6.9	11.4	11.6
12'	4.8	13.8	13.8

CANDELA TABLE

Degrees Vertical	Candela
0	608
5	619
15	733
25	836
35	284
45	109
55	38
65	17
75	5
85	2
90	0

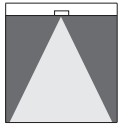
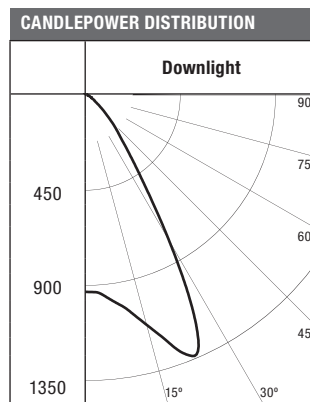
ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixture
0-30	574	65.1
0-40	752	85.3
0-60	857	97.4
0-90	881	100.0
90-180	0	0
0-180	881	100.0

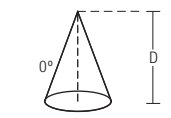
COEFFICIENTS OF UTILIZATION

Ceiling Wall % RCR	80%				70%				50%	
	70	50	30	10	50	30	10	50	10	
Zonal cavity method -- floor reflectance = 20%										
0	119	119	119	119	116	116	116	111	111	
1	113	110	107	105	108	105	103	104	100	
2	107	101	97	93	99	95	92	96	90	
3	100	93	88	84	92	87	83	89	81	
4	95	86	80	76	85	80	75	83	74	
5	89	80	74	69	79	73	69	77	68	
6	84	75	68	63	74	68	63	72	63	
7	80	70	63	59	69	63	58	68	58	
8	76	65	59	54	65	58	54	63	54	
9	72	61	55	50	61	55	50	60	50	
10	68	57	51	47	57	51	47	56	47	

Test Number	P167712
Platform	P406TAT
Element	MH4LED33D9301ELTE E4DLH
Lumens	1352
Efficacy	36.9 Lm/W
SC	1.2

CONE OF LIGHT



D	FC	L	W
5.5'	35.1	6.2	6.2
7'	21.7	8	8
8'	16.6	9.2	9.2
9'	13.1	10.2	10.4
10'	10.6	11.4	11.6
12'	7.4	13.8	13.8

CANDELA TABLE

Degrees Vertical	Candela
0	934
5	950
15	1126
25	1284
35	436
45	168
55	58
65	26
75	8
85	4
90	0

ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixture
0-30	881	65.1
0-40	1154	85.3
0-60	1317	97.4
0-90	1352	100
90-180	0	0
0-180	1352	100

COEFFICIENTS OF UTILIZATION

Ceiling Wall % RCR	80%				70%				50%	
	70	50	30	10	50	30	10	50	10	
Zonal cavity method -- floor reflectance = 20%										
0	119	119	119	119	116	116	116	111	111	
1	113	110	107	105	108	105	103	104	100	
2	107	101	97	93	99	95	92	96	90	
3	100	93	88	84	92	87	83	89	81	
4	95	86	80	76	85	80	75	83	74	
5	89	80	74	69	79	73	69	77	68	
6	84	75	68	63	74	68	63	72	63	
7	80	70	63	59	69	63	58	68	58	
8	76	65	59	54	65	58	54	63	54	
9	72	61	55	50	61	55	50	60	50	
10	68	57	51	47	57	51	47	56	47	