

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

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Peachtree City, GA 30269

Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: McGRAW-EDISON

Report Number: P1445131

Luminaire Tested: TPTN-VA2-735-U-WQ-CG-GM

Issue Date: 05/21/2026

Test Information

Test Method: LM-79-2024
Report Number: P1445131
Test Lab: INNOVATION CENTER(G1)
Issue Date: 5/21/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: MCGRAW-EDISON
Catalog Number: TPTN-VA2-735-U-WQ-CG-GM
Description: TOPTIER NANO SPIDER MOUNT VISUAL COMFORT LED LUMINAIRE 42W 70CRI 3500K w/
TYPE V WIDE DISTRIBUTION OPTIC AND GLASS
Light Source: 3500K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4145.9 lumens
Efficiency: N/A
Efficacy: 98.5 lumens/watt
Luminous Opening: Circular (Dia: 0.71' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G2

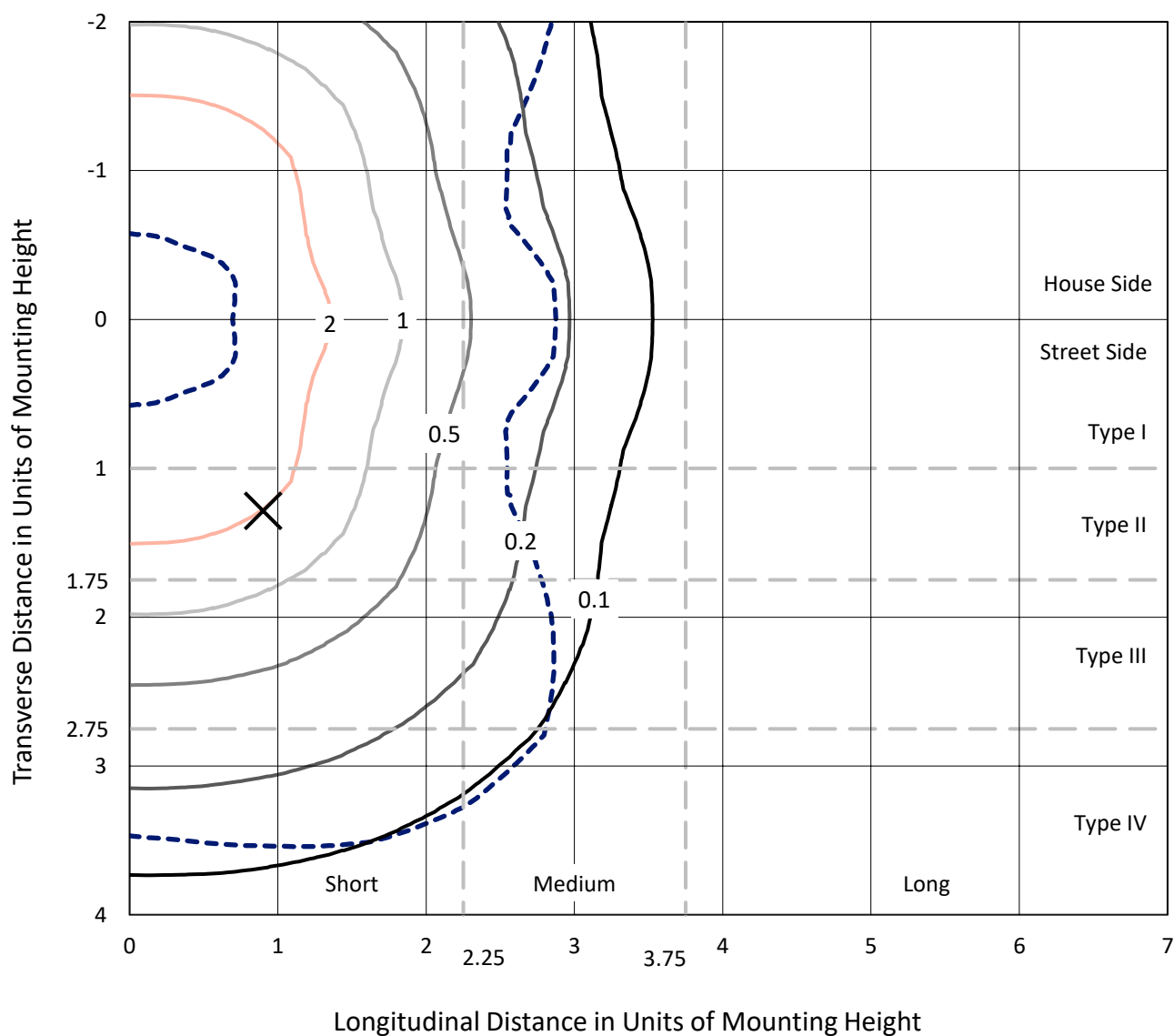
Input Watts (W): 42.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.98
Total Harmonic Distortion (THDi): 7.5%
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT

REPORT NUMBER: P1445131

CATALOG NUMBER: TPTN-VA2-735-U-WQ-CG-GM

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 --- 1/2 Max cd

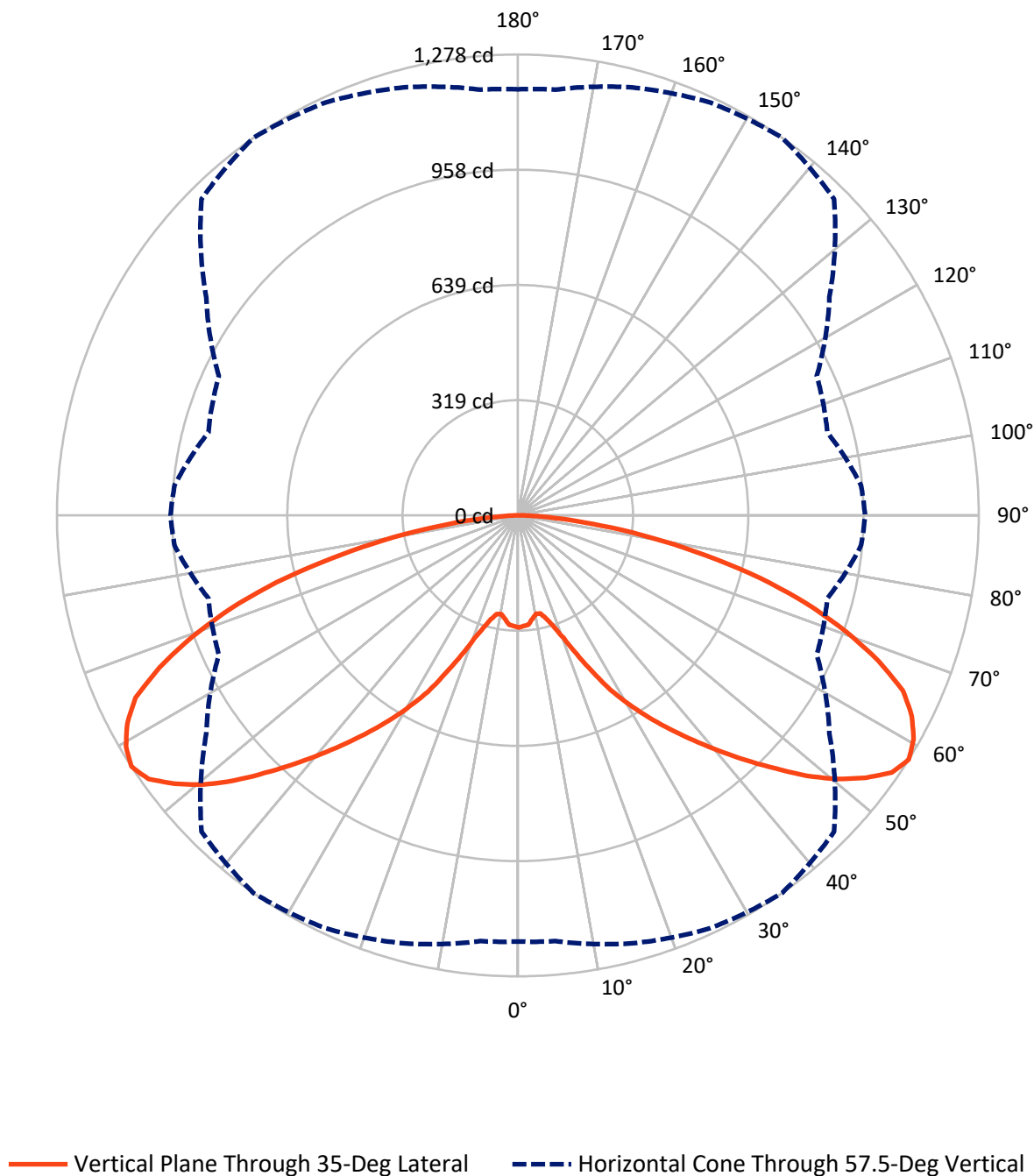


Based on 10 foot mounting height. Maximum calculated value = 4.2 fc
 Type IV - Short - N/A

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CATALOG NUMBER: TPTN-VA2-735-U-WQ-CG-GM

Luminous Intensity Polar Plot



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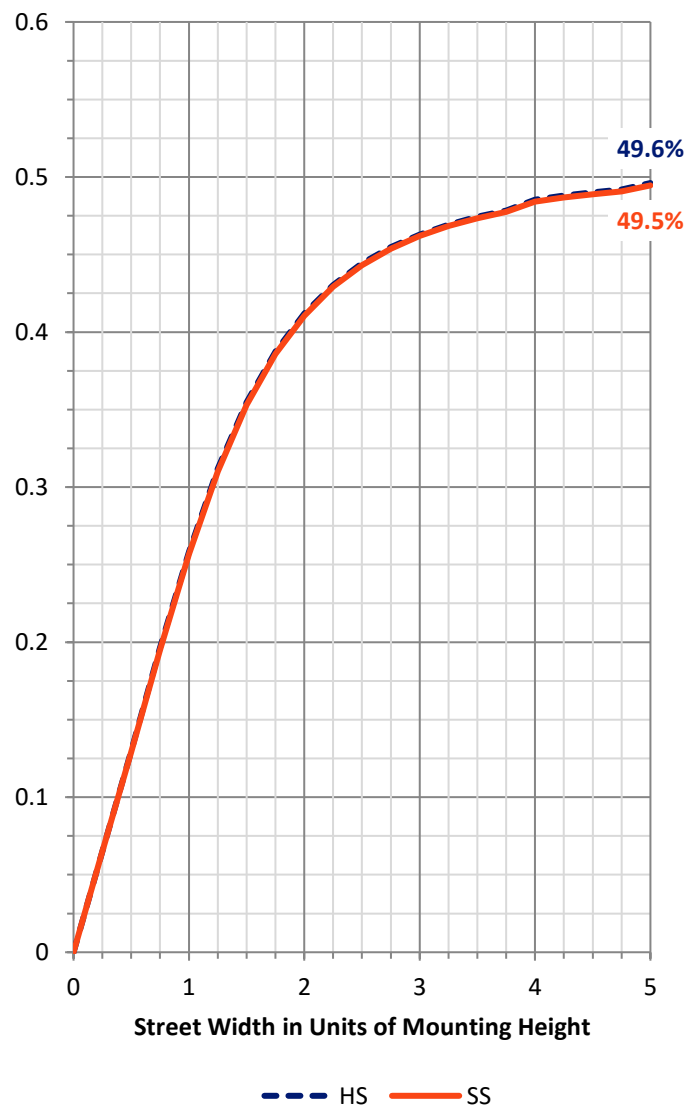
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2072.9	0.0	2072.9
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	2072.9	0.0	2072.9
	% Fixture	50.0	0.0	50.0
Total	Lumens	4145.9	0.0	4145.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	28.3	0.7
10°-20°	89.0	2.1
20°-30°	219.2	5.3
30°-40°	431.7	10.4
40°-50°	707.9	17.1
50°-60°	975.2	23.5
60°-70°	970.1	23.4
70°-80°	597.9	14.4
80°-90°	126.5	3.1
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	4145.9	100.0
0°-180°	4145.9	100.0

Coefficient of Utilization



REPORT NUMBER: P1445131

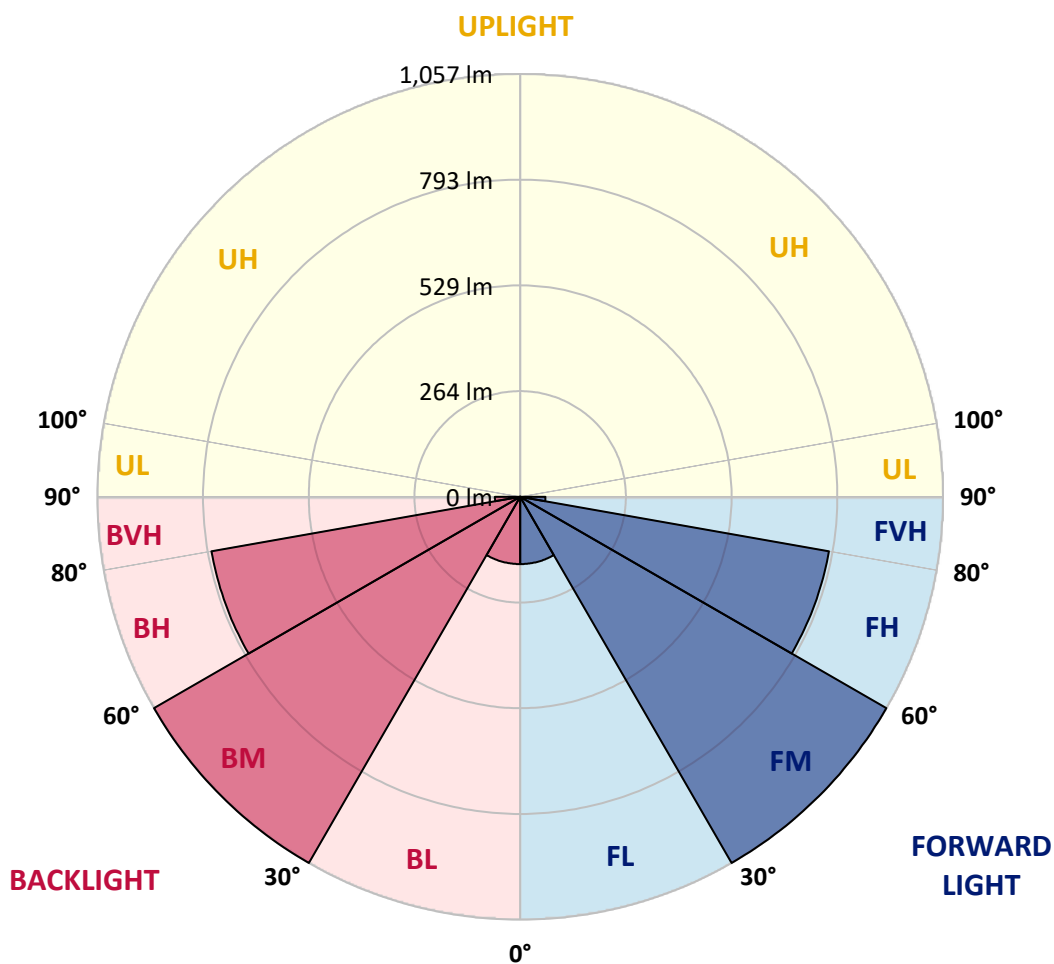
CATALOG NUMBER: TPTN-VA2-735-U-WQ-CG-GM

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	168.3	4.1			
FM	(30°-60°)	1057.4	25.5			
FH	(60°-80°)	784.0	18.9			G1/1800
FVH	(80°-90°)	63.2	1.5			G1/100
BL	(0°-30°)	168.3	4.1	B1/500		
BM	(30°-60°)	1057.4	25.5	B2/2500		
BH	(60°-80°)	784.0	18.9	B2/1000		G2/1000
BVH	(80°-90°)	63.2	1.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type IV Short



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CATALOG NUMBER: TPTN-VA2-735-U-WQ-CG-GM

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	311.0	311.0	311.0	311.0	311.0	311.0	311.0	311.0	311.0	311.0	311.0
2.5°	307.6	307.6	307.6	307.6	306.9	306.9	306.9	307.6	308.3	309.0	309.0
5°	304.8	304.8	304.1	303.5	304.1	304.8	306.9	308.3	309.7	310.3	310.3
7.5°	286.9	286.2	287.6	289.0	289.7	291.7	295.2	297.2	300.0	300.7	300.7
10°	276.6	276.6	276.6	276.6	277.2	280.0	284.8	289.7	294.5	297.2	297.2
12.5°	278.6	278.6	279.3	277.9	279.3	281.4	287.6	294.5	300.0	302.8	304.1
15°	293.8	293.8	294.5	296.6	297.2	296.6	300.7	309.0	315.2	320.7	321.4
17.5°	317.2	319.3	324.1	326.2	324.8	321.4	322.1	328.3	338.6	345.5	347.6
20°	360.0	359.3	366.9	365.5	362.8	353.8	349.0	354.5	367.6	377.9	380.7
22.5°	422.1	420.0	424.1	426.2	417.2	397.9	386.9	388.3	404.1	417.9	423.5
25°	495.9	493.8	498.6	494.5	478.6	453.8	431.7	427.6	444.1	462.8	466.2
27.5°	570.3	571.7	570.3	563.5	548.3	514.5	484.1	471.0	487.6	509.0	511.7
30°	640.7	641.4	632.4	621.4	607.6	566.2	530.3	513.1	529.0	551.7	553.8
32.5°	706.2	706.2	691.0	677.9	668.3	620.7	578.6	556.6	566.9	593.1	597.2
35°	773.1	768.3	749.0	740.0	728.3	680.0	626.9	595.9	606.9	637.2	640.0
37.5°	837.9	832.4	811.0	801.4	791.0	746.2	675.2	638.6	647.6	683.5	686.9
40°	894.5	894.5	875.9	866.2	857.2	810.4	726.9	683.5	689.0	729.7	734.5
42.5°	952.4	955.2	942.1	935.2	927.6	875.2	780.7	728.3	731.7	777.2	780.0
45°	1011.7	1013.8	1011.7	1009.0	1000.7	948.3	838.6	775.2	775.9	823.5	826.9
47.5°	1069.0	1075.2	1079.3	1083.5	1078.6	1029.0	899.3	822.8	815.9	873.1	875.9
50°	1120.7	1124.1	1141.4	1144.1	1149.0	1099.3	953.1	860.0	851.0	909.0	914.5
52.5°	1157.9	1160.7	1186.9	1206.9	1208.3	1155.9	997.9	895.2	875.2	939.3	942.8
55°	1184.8	1189.0	1222.8	1253.8	1257.9	1216.6	1037.2	917.9	892.4	960.0	966.9
57.5°	1181.4	1184.8	1228.3	1262.8	1277.9	1240.0	1054.5	914.5	888.3	955.2	962.8
60°	1153.8	1160.7	1202.8	1244.8	1260.7	1220.0	1038.6	893.1	862.8	932.4	937.9
62.5°	1111.0	1120.7	1162.1	1202.8	1226.2	1187.6	1011.7	851.7	823.5	897.2	902.1
65°	1037.2	1051.7	1104.1	1140.0	1173.8	1134.5	970.4	800.7	773.8	837.2	837.9
67.5°	944.8	949.0	1000.7	1058.6	1079.3	1050.4	897.2	734.5	692.4	753.8	755.2
70°	836.6	846.2	882.1	949.0	965.5	952.4	806.2	650.3	603.5	667.6	670.4
72.5°	714.5	724.1	757.2	813.8	838.6	829.0	704.8	551.0	510.3	566.2	564.8
75°	575.9	584.1	620.7	666.2	694.5	686.9	585.5	447.6	411.0	455.2	455.9
77.5°	433.1	444.1	474.5	519.3	531.0	526.2	451.0	340.0	311.0	339.3	338.6
80°	302.8	309.0	333.8	357.2	378.6	375.2	320.7	237.9	213.1	232.4	229.0
82.5°	180.0	185.5	202.8	219.3	233.1	237.2	203.4	144.8	130.3	137.2	131.7
85°	84.1	88.3	97.9	110.3	120.0	122.8	107.6	73.8	63.4	63.4	55.9
87.5°	21.4	22.1	28.3	34.5	39.3	43.4	37.9	29.7	24.1	15.9	9.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

MCGRAW EDISON

Report Number: SP1-2411-284-1

Test Date: 11/15/2024

Luminaire Tested: TTN-D0-735-U-WQ

Data in this report applies to families of products including TTN-D0-735-U-WQ

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2411-284-1
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 11/15/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: MCGRAW EDISON
 Catalog Number: **TTN-D0-735-U-WQ**
 Description: TOPTIER NANO LED PARKING GARAGE LUMINAIRE. 3500K, 70 CRI LEDS AND WIDE DISTRIBUTION

Spectral Parameters

CCT (K):	3405	CRI (Ra):	73.9		
CIE u':	0.2365	R1:	71.3	R9:	-18.0
CIE v':	0.5180	R2:	80.3	R10:	53.1
Duv:	0.0036	R3:	87.8	R11:	68.6
CIE x:	0.4148	R4:	73.2	R12:	42.6
CIE y:	0.4038	R5:	69.8	R13:	72.5
CIE z:	0.1814	R6:	71.8	R14:	92.7
Peak Wavelength (nm):	596	R7:	82.8	R15:	64.3
Dominant Wavelength (nm):	579	R8:	54.1		
Purity:	45.70672				
Rf:	76.6				
Rg:	95.4				



Test Conditions

Stabilization Time: 38M
 Operation Time: 1H 38M
 Sphere Temperature (°C): 24.9

REPORT NUMBER: SP1-2411-284-1

Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/22/2024	10/22/2025
DC Power Source	IN0208	10/22/2024	10/22/2025
Sphere Thermometer	IN0085	10/22/2024	10/22/2025
Room Thermometer	IN0046	10/22/2024	10/22/2025

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CIE 1931 Chromaticity Diagram



CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3500K 4-step quadrangle

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Photopic Flux vs. Wavelength



Photopic Lumens: NR

λ (nm)	Power W/nm	Lumens (ϕ/nm)	λ (nm)	Power W/nm	Lumens (ϕ/nm)	λ (nm)	Power W/nm	Lumens (ϕ/nm)	λ (nm)	Power W/nm	Lumens (ϕ/nm)	λ (nm)	Power W/nm	Lumens (ϕ/nm)
360	0	NR	490	119	NR	620	846	NR	750	28	NR	880	1	NR
365	0	NR	495	160	NR	625	793	NR	755	25	NR	885	0	NR
370	0	NR	500	225	NR	630	739	NR	760	22	NR	890	0	NR
375	0	NR	505	308	NR	635	681	NR	765	19	NR	895	0	NR
380	0	NR	510	392	NR	640	623	NR	770	16	NR	900	0	NR
385	0	NR	515	474	NR	645	563	NR	775	14	NR	905	0	NR
390	0	NR	520	545	NR	650	506	NR	780	12	NR	910	0	NR
395	1	NR	525	603	NR	655	451	NR	785	10	NR	915	0	NR
400	3	NR	530	649	NR	660	399	NR	790	9	NR	920	0	NR
405	5	NR	535	687	NR	665	352	NR	795	8	NR	925	0	NR
410	11	NR	540	721	NR	670	307	NR	800	6	NR	930	0	NR
415	21	NR	545	751	NR	675	268	NR	805	6	NR	935	0	NR
420	43	NR	550	779	NR	680	234	NR	810	5	NR	940	0	NR
425	88	NR	555	811	NR	685	203	NR	815	4	NR	945	0	NR
430	163	NR	560	843	NR	690	176	NR	820	4	NR	950	0	NR
435	288	NR	565	873	NR	695	152	NR	825	3	NR	955	0	NR
440	416	NR	570	907	NR	700	131	NR	830	3	NR	960	0	NR
445	566	NR	575	938	NR	705	112	NR	835	3	NR	965	0	NR
450	810	NR	580	965	NR	710	96	NR	840	2	NR	970	0	NR
455	669	NR	585	986	NR	715	81	NR	845	2	NR	975	0	NR
460	338	NR	590	997	NR	720	69	NR	850	2	NR	980	0	NR
465	246	NR	595	997	NR	725	58	NR	855	1	NR	985	0	NR
470	182	NR	600	991	NR	730	49	NR	860	1	NR	990	0	NR
475	115	NR	605	968	NR	735	42	NR	865	1	NR	995	0	NR
480	97	NR	610	939	NR	740	37	NR	870	1	NR	1000	0	NR
485	103	NR	615	896	NR	745	32	NR	875	1	NR			

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Scotopic Flux vs. Wavelength



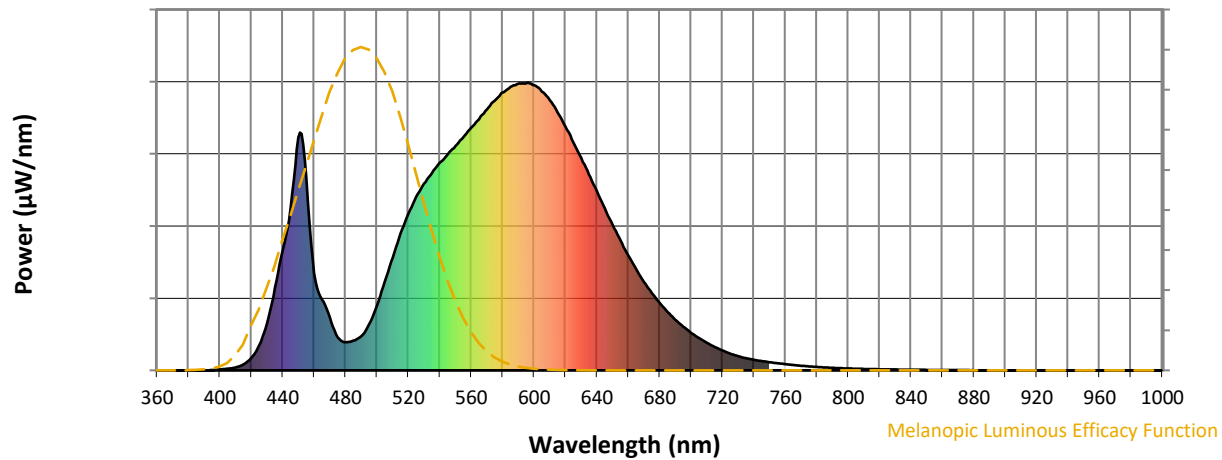
Scotopic Lumens: NR

S/P: 1.33

λ (nm)	Power W ^λ /nm	Lumens (Φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (Φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (Φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (Φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (Φ/nm)
360	0	NR	490	119	NR	620	846	NR	750	28	NR	880	1	NR
365	0	NR	495	160	NR	625	793	NR	755	25	NR	885	0	NR
370	0	NR	500	225	NR	630	739	NR	760	22	NR	890	0	NR
375	0	NR	505	308	NR	635	681	NR	765	19	NR	895	0	NR
380	0	NR	510	392	NR	640	623	NR	770	16	NR	900	0	NR
385	0	NR	515	474	NR	645	563	NR	775	14	NR	905	0	NR
390	0	NR	520	545	NR	650	506	NR	780	12	NR	910	0	NR
395	1	NR	525	603	NR	655	451	NR	785	10	NR	915	0	NR
400	3	NR	530	649	NR	660	399	NR	790	9	NR	920	0	NR
405	5	NR	535	687	NR	665	352	NR	795	8	NR	925	0	NR
410	11	NR	540	721	NR	670	307	NR	800	6	NR	930	0	NR
415	21	NR	545	751	NR	675	268	NR	805	6	NR	935	0	NR
420	43	NR	550	779	NR	680	234	NR	810	5	NR	940	0	NR
425	88	NR	555	811	NR	685	203	NR	815	4	NR	945	0	NR
430	163	NR	560	843	NR	690	176	NR	820	4	NR	950	0	NR
435	288	NR	565	873	NR	695	152	NR	825	3	NR	955	0	NR
440	416	NR	570	907	NR	700	131	NR	830	3	NR	960	0	NR
445	566	NR	575	938	NR	705	112	NR	835	3	NR	965	0	NR
450	810	NR	580	965	NR	710	96	NR	840	2	NR	970	0	NR
455	669	NR	585	986	NR	715	81	NR	845	2	NR	975	0	NR
460	338	NR	590	997	NR	720	69	NR	850	2	NR	980	0	NR
465	246	NR	595	997	NR	725	58	NR	855	1	NR	985	0	NR
470	182	NR	600	991	NR	730	49	NR	860	1	NR	990	0	NR
475	115	NR	605	968	NR	735	42	NR	865	1	NR	995	0	NR
480	97	NR	610	939	NR	740	37	NR	870	1	NR	1000	0	NR
485	103	NR	615	896	NR	745	32	NR	875	1	NR			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.47

λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	119	NR	620	846	NR	750	28	NR	880	1	NR
365	0	NR	495	160	NR	625	793	NR	755	25	NR	885	0	NR
370	0	NR	500	225	NR	630	739	NR	760	22	NR	890	0	NR
375	0	NR	505	308	NR	635	681	NR	765	19	NR	895	0	NR
380	0	NR	510	392	NR	640	623	NR	770	16	NR	900	0	NR
385	0	NR	515	474	NR	645	563	NR	775	14	NR	905	0	NR
390	0	NR	520	545	NR	650	506	NR	780	12	NR	910	0	NR
395	1	NR	525	603	NR	655	451	NR	785	10	NR	915	0	NR
400	3	NR	530	649	NR	660	399	NR	790	9	NR	920	0	NR
405	5	NR	535	687	NR	665	352	NR	795	8	NR	925	0	NR
410	11	NR	540	721	NR	670	307	NR	800	6	NR	930	0	NR
415	21	NR	545	751	NR	675	268	NR	805	6	NR	935	0	NR
420	43	NR	550	779	NR	680	234	NR	810	5	NR	940	0	NR
425	88	NR	555	811	NR	685	203	NR	815	4	NR	945	0	NR
430	163	NR	560	843	NR	690	176	NR	820	4	NR	950	0	NR
435	288	NR	565	873	NR	695	152	NR	825	3	NR	955	0	NR
440	416	NR	570	907	NR	700	131	NR	830	3	NR	960	0	NR
445	566	NR	575	938	NR	705	112	NR	835	3	NR	965	0	NR
450	810	NR	580	965	NR	710	96	NR	840	2	NR	970	0	NR
455	669	NR	585	986	NR	715	81	NR	845	2	NR	975	0	NR
460	338	NR	590	997	NR	720	69	NR	850	2	NR	980	0	NR
465	246	NR	595	997	NR	725	58	NR	855	1	NR	985	0	NR
470	182	NR	600	991	NR	730	49	NR	860	1	NR	990	0	NR
475	115	NR	605	968	NR	735	42	NR	865	1	NR	995	0	NR
480	97	NR	610	939	NR	740	37	NR	870	1	NR	1000	0	NR
485	103	NR	615	896	NR	745	32	NR	875	1	NR			

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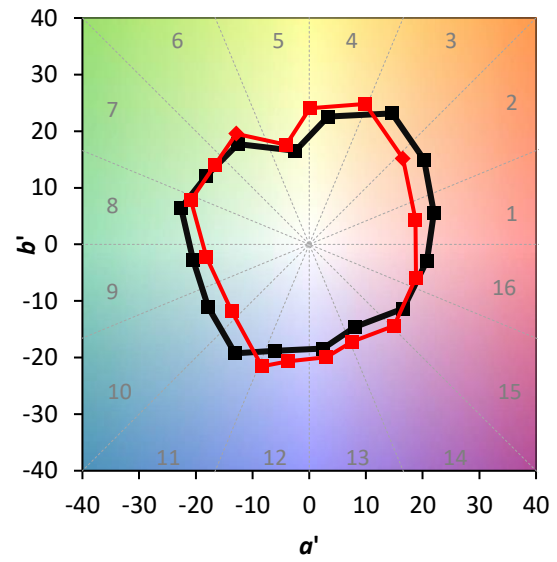
TM-30-18

Summary

$R_f = 76.6$
 $R_g = 95.4$
 $CIE R_a = 73.9$
 $R_g = -18.0$



Color Vector Graphics

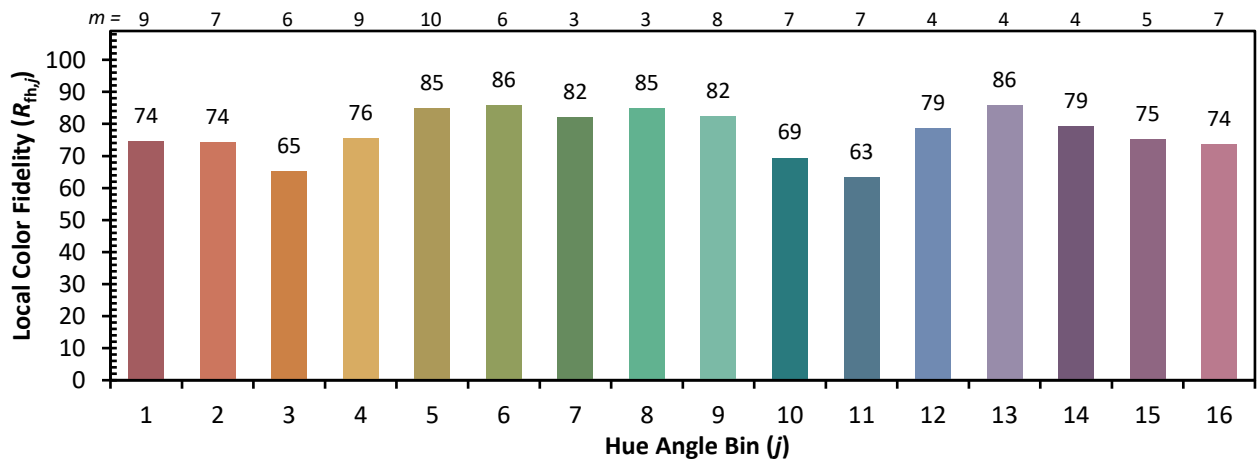
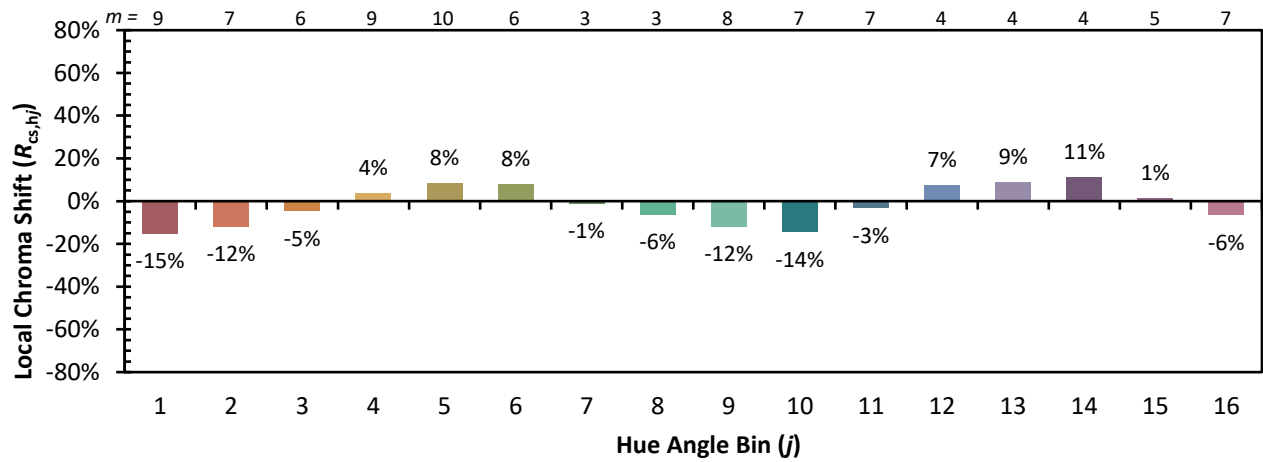


Individual Sample Fidelity Index ($R_{f,i}$)

CES01 = 86	CES26 = 67	CES51 = 88	CES76 = 56
CES02 = 62	CES27 = 89	CES52 = 88	CES77 = 75
CES03 = 31	CES28 = 83	CES53 = 78	CES78 = 60
CES04 = 70	CES29 = 69	CES54 = 86	CES79 = 85
CES05 = 48	CES30 = 83	CES55 = 85	CES80 = 82
CES06 = 51	CES31 = 72	CES56 = 75	CES81 = 78
CES07 = 41	CES32 = 65	CES57 = 75	CES82 = 92
CES08 = 40	CES33 = 78	CES58 = 76	CES83 = 90
CES09 = 29	CES34 = 74	CES59 = 87	CES84 = 88
CES10 = 75	CES35 = 86	CES60 = 91	CES85 = 79
CES11 = 58	CES36 = 93	CES61 = 84	CES86 = 72
CES12 = 64	CES37 = 81	CES62 = 88	CES87 = 79
CES13 = 43	CES38 = 92	CES63 = 74	CES88 = 82
CES14 = 74	CES39 = 96	CES64 = 69	CES89 = 72
CES15 = 71	CES40 = 92	CES65 = 66	CES90 = 82
CES16 = 47	CES41 = 93	CES66 = 62	CES91 = 79
CES17 = 50	CES42 = 83	CES67 = 60	CES92 = 63
CES18 = 56	CES43 = 79	CES68 = 68	CES93 = 77
CES19 = 72	CES44 = 99	CES69 = 76	CES94 = 56
CES20 = 65	CES45 = 86	CES70 = 61	CES95 = 70
CES21 = 86	CES46 = 83	CES71 = 55	CES96 = 79
CES22 = 79	CES47 = 85	CES72 = 85	CES97 = 85
CES23 = 92	CES48 = 78	CES73 = 53	CES98 = 78
CES24 = 91	CES49 = 81	CES74 = 95	CES99 = 68
CES25 = 72	CES50 = 88	CES75 = 57	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)