

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: McGRAW-EDISON

Report Number: P1435655

Luminaire Tested: **GALN-SB4A-935-U-T4LG**

Issue Date: 03/24/202

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Report Generated By 670245763



**Test Information**

Test Method: LM-79-08  
 Report Number: P1435655  
 Test Lab: INNOVATION CENTER(G1)  
 Issue Date: 03/24/202  
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
 Product Line: McGRAW-EDISON  
 Catalog Number: GALN-SB4A-935-U-T4LG  
 Description: GALLEON II AREA AND ROADWAY HIGH DENSITY LUMINAIRE 350mA 4xLight Square PACKAGE 90CRI 3500K FIXTURE w/ TYPE IV LOW GLARE  
 Light Source: (104) 3500K CCT, 90 CRI LEDS  
 Ballast/Driver: ELECTRONIC DRIVER

Luminaire Equipment:	Sample No.	Condition	Description
	a	good	reflector
	b	good	lens
	c	good	housing
	d	good	cord

**Summary**

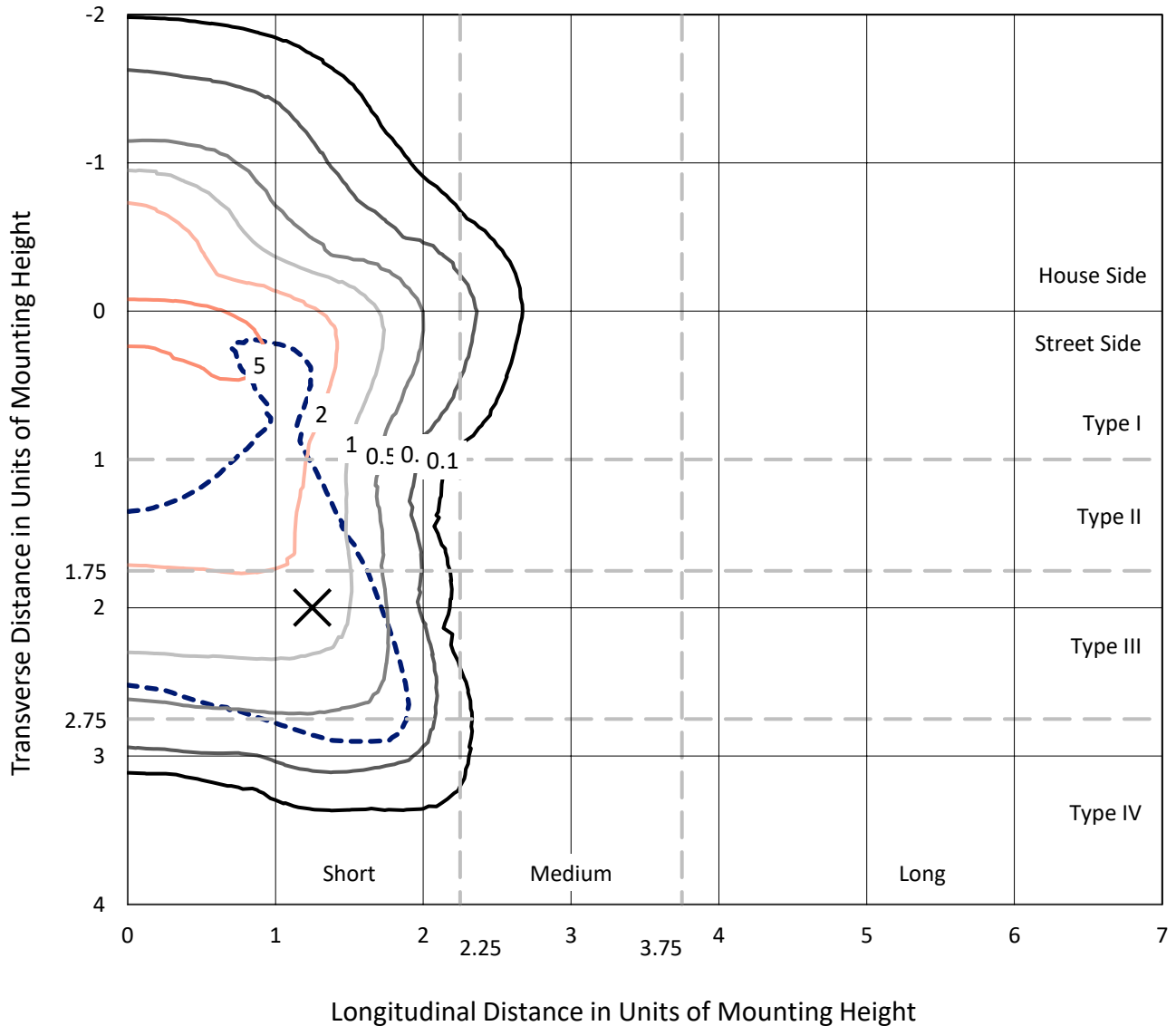
Lumens per Lamp: N/A  
 Luminaire Lumens: 12248.2 lumens  
 Efficiency: N/A  
 Efficacy: 107.4 lumens/watt  
 Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
 IES Classification: Type IV - Short  
 BUG Rating: B2 - U0 - G2

Input Watts (W): 114  
 Input Voltage (V): 120  
 Input Current (Ain): NR  
 Voltage Rise (V): NR  
 Power Factor: 0.97  
 Total Harmonic Distortion (THDi): NR  
 Frequency (hertz): 60  
 Stabilization Time: NR  
 Operation Time: NR  
 Ambient Temperature (°C): NR  
 Test Distance: 28.75 FT

REPORT NUMBER: P1435655  
 CATALOG NUMBER: GALN-SB4A-935-U-T4LG

### Iso-Footcandle Lines of Horizontal Illumination

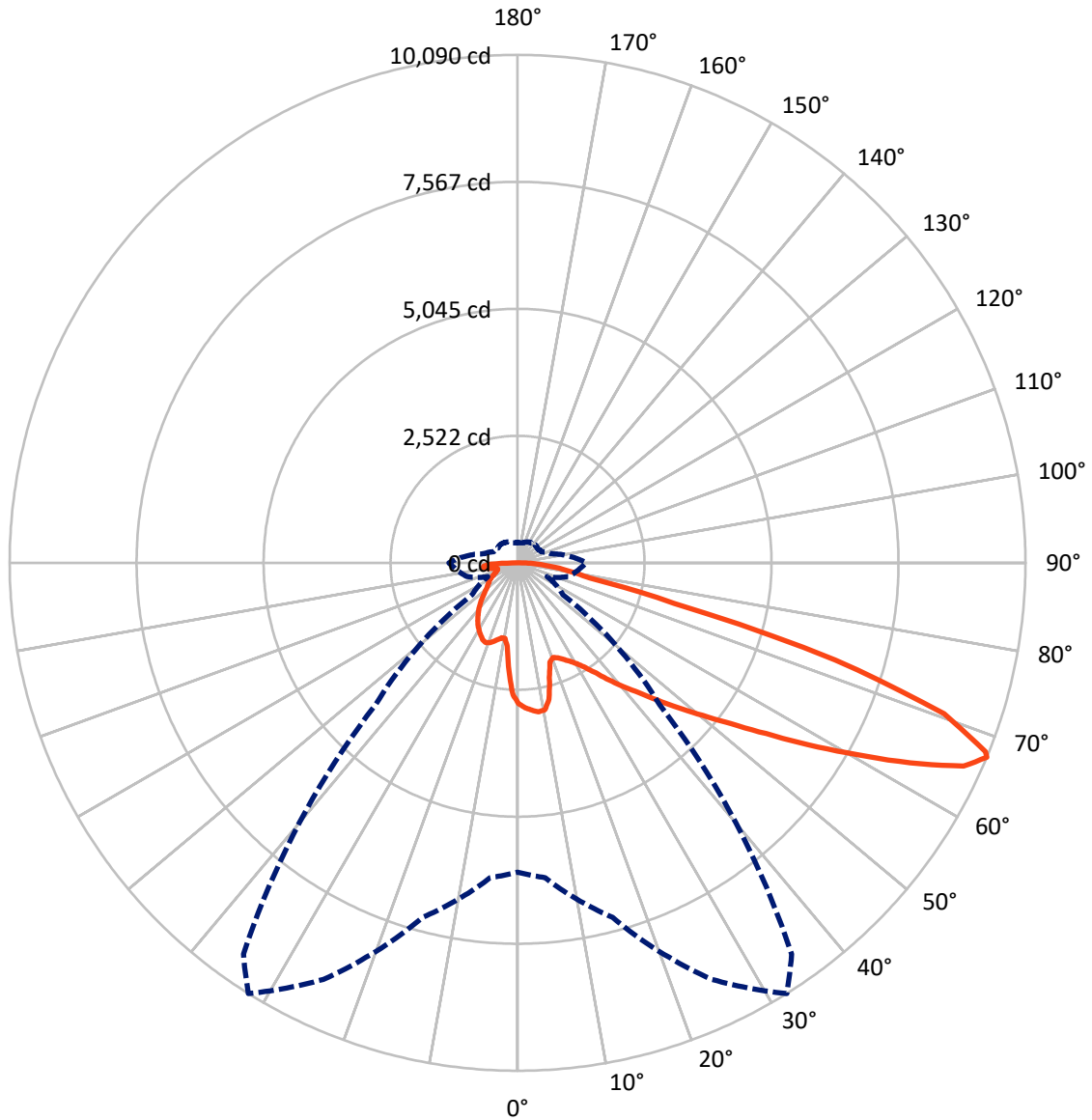
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 7.6 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 32-Deg Lateral      - - - Horizontal Cone Through 67-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2899.7	0.0	2899.7
	% Fixture	23.7	0.0	23.7
<b>Street Side</b>	Lumens	9348.5	0.0	9348.5
	% Fixture	76.3	0.0	76.3
<b>Total</b>	Lumens	12248.2	0.0	12248.2
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	244.5	2.0
10°-20°	649.2	5.3
20°-30°	1060.2	8.7
30°-40°	1562.6	12.8
40°-50°	2155.0	17.6
50°-60°	2722.4	22.2
60°-70°	2634.8	21.5
70°-80°	940.3	7.7
80°-90°	279.2	2.3
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°	12248.2	100.0
0°-180°	12248.2	100.0

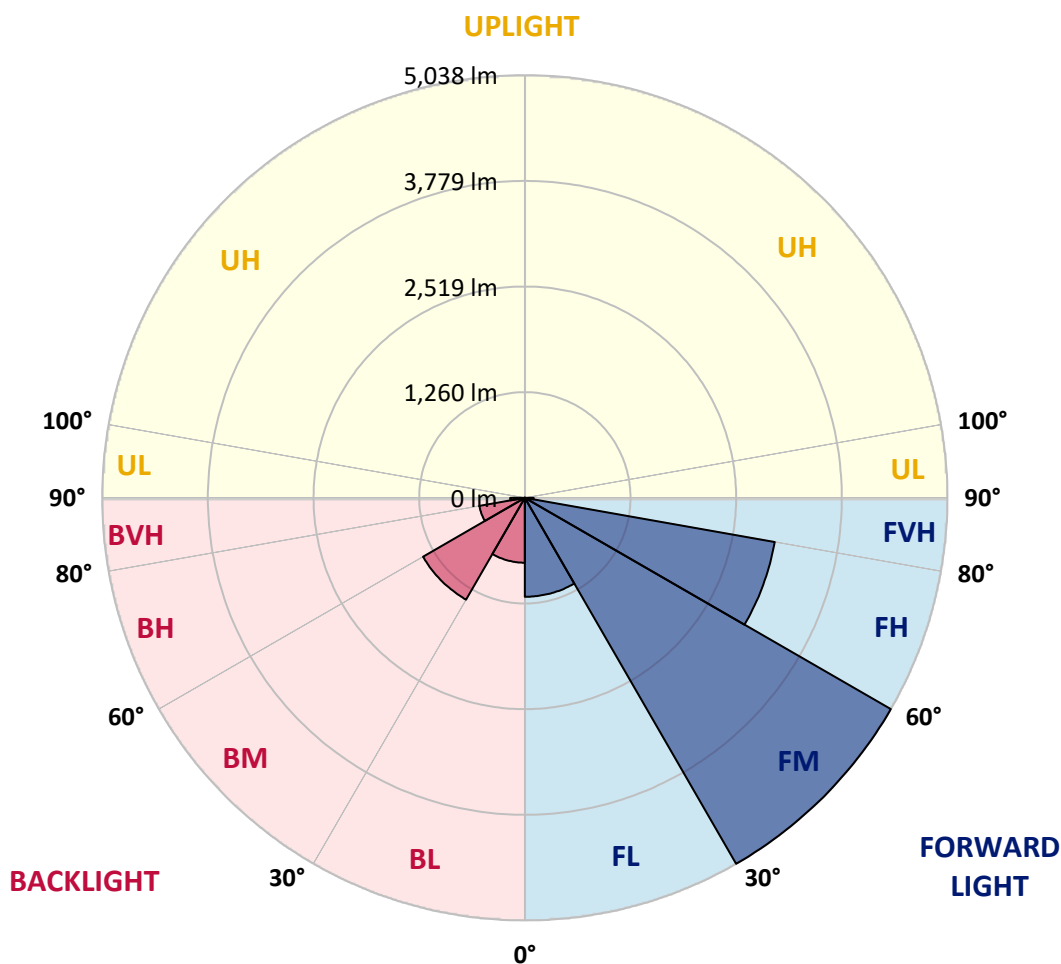


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1180.1	9.6			
FM (30°-60°)	5038.1	41.1			
FH (60°-80°)	3025.1	24.7			G2/5000
FVH (80°-90°)	105.2	0.9			G2/225
BL (0°-30°)	773.8	6.3	B2/1000		
BM (30°-60°)	1401.9	11.4	B2/2500		
BH (60°-80°)	550.0	4.5	B2/1000		G2/1000
BVH (80°-90°)	174.0	1.4			G2/225
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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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	32°	35°	45°	55°	65°	75°	85°
0°	2798.5	2798.5	2798.5	2798.5	2798.5	2798.5	2798.5	2798.5	2798.5	2798.5	2798.5
2.5°	2904.5	2896.4	2888.2	2893.7	2882.8	2880.1	2866.5	2861.0	2844.7	2842.0	2812.1
5°	2964.4	2948.1	2945.3	2950.8	2939.9	2939.9	2929.0	2920.9	2896.4	2882.8	2839.3
7.5°	2964.4	2961.7	2967.1	2986.1	2988.8	2988.8	2988.8	2991.6	2967.1	2948.1	2880.1
10°	2795.8	2768.6	2828.4	2923.6	2969.8	2997.0	3046.0	3075.9	3056.8	3043.2	2950.8
12.5°	2292.6	2295.3	2390.5	2594.5	2779.4	2858.3	3062.3	3171.1	3179.2	3157.5	3040.5
15°	1944.5	1958.1	2007.1	2153.9	2366.1	2483.0	2967.1	3255.4	3320.6	3298.9	3149.3
17.5°	1838.5	1846.6	1868.4	1952.7	2072.3	2167.5	2708.7	3309.8	3492.0	3464.8	3271.7
20°	1822.1	1827.6	1854.8	1925.5	2007.1	2061.5	2444.9	3266.2	3652.4	3641.6	3383.2
22.5°	1824.9	1830.3	1865.6	1963.6	2047.9	2094.1	2360.6	3165.6	3821.0	3831.9	3497.4
25°	1830.3	1833.0	1887.4	2017.9	2124.0	2181.1	2415.0	3075.9	3962.5	4054.9	3622.5
27.5°	1860.2	1868.4	1941.8	2088.7	2213.8	2279.0	2542.8	3105.8	4117.5	4307.9	3772.1
30°	1941.8	1947.2	2037.0	2189.3	2325.3	2393.3	2695.1	3225.5	4307.9	4568.9	3919.0
32.5°	2069.6	2075.1	2178.4	2336.1	2483.0	2564.6	2893.7	3453.9	4520.0	4843.6	4065.8
35°	2246.4	2249.1	2366.1	2534.7	2689.7	2782.2	3124.8	3712.3	4740.3	5077.5	4174.6
37.5°	2455.8	2474.8	2594.5	2771.3	2953.5	3037.8	3396.8	4014.1	4936.1	5276.0	4237.1
40°	2744.1	2749.5	2866.5	3037.8	3230.9	3312.5	3668.7	4299.7	5150.9	5393.0	4294.3
42.5°	3040.5	3086.8	3184.7	3375.0	3519.2	3584.4	3978.8	4560.8	5322.3	5398.4	4269.8
45°	3437.6	3472.9	3570.8	3739.5	3883.6	3959.7	4313.3	4800.1	5409.3	5352.2	4215.4
47.5°	3891.8	3913.5	3992.4	4144.7	4305.1	4359.5	4661.4	4936.1	5441.9	5319.5	4190.9
50°	4427.5	4427.5	4484.6	4615.2	4762.0	4838.2	4982.3	5017.7	5537.1	5262.4	4253.5
52.5°	4879.0	4900.7	4976.9	5161.8	5308.7	5395.7	5232.5	5142.8	5344.0	4944.2	4272.5
55°	5311.4	5335.9	5507.2	5738.4	5988.6	6083.8	5545.3	5080.2	4694.0	4479.2	4142.0
57.5°	5724.8	5776.4	5991.3	6442.7	6820.8	6812.6	5942.3	4520.0	3831.9	3965.2	3856.4
60°	6301.3	6355.7	6698.4	7266.8	7729.1	7536.0	5947.8	3761.2	2986.1	3165.6	3320.6
62.5°	6782.7	6875.2	7378.3	8324.7	8749.0	8447.1	5455.5	2880.1	1982.6	2208.3	2567.3
65°	6739.2	6861.6	7642.1	9102.5	9736.2	9456.1	4734.8	1822.1	1022.6	1509.4	1797.7
67°	6146.3	6279.6	7291.3	9129.7	10089.7	9491.4	3997.8	1101.4	650.0	1047.0	1248.3
67.5°	5806.4	6002.2	7117.2	9078.0	10024.5	9341.8	3666.0	921.9	611.9	973.6	1136.8
70°	3570.8	3886.3	5341.3	8025.6	8985.6	7818.9	2037.0	522.2	497.7	652.7	786.0
72.5°	1074.2	1169.4	2061.5	5148.2	6595.0	5795.5	916.5	402.5	446.0	524.9	606.5
75°	522.2	557.5	851.2	2105.0	3211.9	3195.5	511.3	345.4	413.4	440.6	478.7
77.5°	334.5	356.3	530.3	1177.6	1471.3	1310.8	369.9	301.9	367.1	361.7	356.3
80°	209.4	220.3	340.0	682.6	1085.1	905.6	272.0	247.5	315.5	280.1	252.9
82.5°	136.0	149.6	217.6	416.1	775.1	674.5	179.5	176.8	261.1	223.0	195.8
85°	89.7	100.6	138.7	244.8	459.6	481.4	116.9	122.4	201.3	168.6	149.6
87.5°	32.6	40.8	70.7	108.8	214.8	266.5	49.0	46.2	97.9	78.9	62.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P1435655  
 CATALOG NUMBER: GALN-SB4A-935-U-T4LG

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2798.5	2798.5	2798.5	2798.5	2798.5	2798.5	2798.5	2798.5	2798.5	2798.5	2798.5
2.5°	2806.6	2798.5	2760.4	2727.8	2703.3	2670.7	2635.3	2594.5	2567.3	2572.7	2564.6
5°	2820.2	2798.5	2725.0	2613.5	2504.8	2368.8	2194.7	2091.4	2012.5	1971.7	1982.6
7.5°	2850.1	2812.1	2657.1	2431.3	2148.5	1871.1	1699.8	1601.8	1555.6	1536.6	1533.9
10°	2901.8	2836.5	2570.0	2148.5	1778.6	1591.0	1528.4	1501.2	1495.8	1495.8	1493.1
12.5°	2964.4	2861.0	2423.2	1873.8	1601.8	1533.9	1523.0	1525.7	1533.9	1542.0	1528.4
15°	3040.5	2871.9	2241.0	1707.9	1566.5	1550.2	1566.5	1585.5	1599.1	1610.0	1596.4
17.5°	3116.7	2861.0	2069.6	1629.0	1571.9	1593.7	1626.3	1656.2	1664.4	1680.7	1669.8
20°	3171.1	2823.0	1922.8	1599.1	1585.5	1634.5	1675.3	1707.9	1724.2	1735.1	1724.2
22.5°	3211.9	2774.0	1816.7	1569.2	1585.5	1645.4	1694.3	1732.4	1751.4	1762.3	1748.7
25°	3247.2	2706.0	1735.1	1525.7	1552.9	1610.0	1664.4	1702.5	1729.7	1746.0	1737.8
27.5°	3290.7	2651.6	1659.0	1460.4	1484.9	1539.3	1596.4	1642.6	1694.3	1721.5	1716.1
30°	3339.7	2624.4	1585.5	1389.7	1406.0	1460.4	1528.4	1591.0	1661.7	1697.0	1697.0
32.5°	3396.8	2605.4	1517.5	1321.7	1335.3	1395.2	1460.4	1517.5	1593.7	1650.8	1648.1
35°	3421.3	2583.6	1463.1	1259.2	1286.4	1335.3	1387.0	1425.1	1503.9	1571.9	1577.4
37.5°	3445.7	2575.5	1436.0	1210.2	1232.0	1270.1	1297.3	1316.3	1389.7	1460.4	1463.1
40°	3475.7	2613.5	1455.0	1177.6	1158.6	1196.6	1210.2	1221.1	1259.2	1305.4	1305.4
42.5°	3456.6	2640.7	1498.5	1147.7	1068.8	1112.3	1117.8	1115.0	1117.8	1120.5	1117.8
45°	3407.7	2613.5	1498.5	1101.4	973.6	1019.9	1017.1	1003.5	981.8	924.7	916.5
47.5°	3396.8	2597.2	1441.4	1025.3	878.4	916.5	921.9	894.8	832.2	772.4	753.3
50°	3443.0	2627.1	1351.6	932.8	796.8	829.5	843.1	796.8	726.1	663.6	652.7
52.5°	3511.0	2665.2	1221.1	832.2	728.9	761.5	777.8	726.1	652.7	603.8	598.3
55°	3502.9	2665.2	1074.2	739.7	677.2	701.7	728.9	674.5	617.4	590.2	587.4
57.5°	3326.1	2564.6	965.5	674.5	628.2	650.0	685.3	633.7	579.3	584.7	592.9
60°	2980.7	2303.5	883.9	630.9	584.7	606.5	644.5	584.7	514.0	495.0	495.0
62.5°	2455.8	1898.3	818.6	587.4	543.9	571.1	590.2	511.3	465.1	443.3	443.3
65°	1841.2	1468.6	750.6	552.1	508.6	538.5	516.7	478.7	432.4	416.1	418.8
67°	1365.2	1139.5	693.5	522.2	486.8	500.4	484.1	456.9	410.7	397.1	410.7
67.5°	1226.5	1082.4	679.9	514.0	481.4	492.2	475.9	454.2	405.2	391.6	405.2
70°	843.1	832.2	606.5	475.9	451.5	440.6	448.7	421.5	380.7	375.3	388.9
72.5°	641.8	663.6	543.9	443.3	418.8	405.2	424.3	397.1	356.3	364.4	378.0
75°	503.1	535.8	486.8	397.1	380.7	383.5	421.5	410.7	378.0	386.2	388.9
77.5°	372.6	432.4	416.1	345.4	331.8	369.9	475.9	508.6	451.5	437.9	418.8
80°	272.0	310.0	350.8	285.6	277.4	356.3	587.4	650.0	557.5	503.1	489.5
82.5°	201.3	217.6	288.3	228.4	201.3	318.2	652.7	764.2	663.6	560.2	543.9
85°	144.1	168.6	228.4	168.6	133.3	261.1	639.1	747.9	658.1	530.3	516.7
87.5°	51.7	73.4	97.9	76.1	68.0	179.5	527.6	538.5	410.7	187.7	190.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



LM-79-08: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

McGRAW-EDISON

Report Number: SP1-2106-271-3

Luminaire Tested: GFLD-SA1-A-935-U-WR-X-BK

Test Date: 06/15/2021

**Test Information**

Test Method: LM-79-08  
 Report Number: SP1-2106-271-3  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1  
 Measurement Geometry: 4π  
 Issue Date: 06/15/2021  
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
 Product Line: MCGRAW-EDISON  
 Catalog Number: **GFLD-SA1-A-935-U-WR-X-BK**  
 Description: MCGRAW EDISON

N6, BLACK

**Spectral Parameters**

CCT (K): 3364  
 CIE u': 0.2376  
 CIE v': 0.5188  
 Duv: 0.0036  
 CIE x: 0.4173  
 CIE y: 0.4050  
 CIE z: 0.1777  
 Peak Wavelength (nm): 622  
 Dominant Wavelength (nm): 580  
 Purity: 46.9  
 R<sub>f</sub>: 92.6  
 R<sub>g</sub>: 98.3

CRI (Ra): 92.0  
 R1: 91.7  
 R2: 94.0  
 R3: 95.5  
 R4: 93.0  
 R5: 90.9  
 R6: 92.2  
 R7: 94.8  
 R8: 84.1  
 R9: 59.7  
 R10: 85.2  
 R11: 92.8  
 R12: 78.2  
 R13: 92.0  
 R14: 96.9

**Test Conditions**  
 Stabilization Time: 76M  
 Operation Time: 12H  
 Room Temperature (°C) / RH%: 24.8/44%  
 Sphere Temperature (°C): 24.9



REPORT NUMBER: SP1-2106-271-3

Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	1/31/2021	7/31/2021
Power Meter	XITRON 2801 IN0071	12/1/2020	12/1/2021
AC Power Source	CHROMA 61603 IN0063	12/1/2020	12/1/2021
DC Power Source	AGILENT E3634A IN0208	12/1/2020	12/1/2021
Sphere Thermometer	ONSET IN0085	12/1/2020	12/1/2021
Room Thermometer	ONSET IN0046	12/1/2020	12/1/2021

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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**



#####

λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)
360	792	NR	490	14205	NR	620	36151	NR	750	3427	NR	880	712	NR
365	640	NR	495	15647	NR	625	36077	NR	755	3047	NR	885	942	NR
370	630	NR	500	17088	NR	630	35451	NR	760	2790	NR	890	952	NR
375	684	NR	505	18475	NR	635	34417	NR	765	2433	NR	895	764	NR
380	731	NR	510	19780	NR	640	33166	NR	770	2178	NR	900	743	NR
385	664	NR	515	21055	NR	645	32124	NR	775	1893	NR	905	776	NR
390	595	NR	520	22268	NR	650	30559	NR	780	1724	NR	910	659	NR
395	520	NR	525	23497	NR	655	28656	NR	785	1549	NR	915	701	NR
400	491	NR	530	24653	NR	660	27033	NR	790	1451	NR	920	728	NR
405	489	NR	535	25661	NR	665	25030	NR	795	1317	NR	925	793	NR
410	585	NR	540	26289	NR	670	22820	NR	800	1124	NR	930	877	NR
415	826	NR	545	26945	NR	675	20678	NR	805	1116	NR	935	923	NR
420	1336	NR	550	27713	NR	680	18748	NR	810	1105	NR	940	1001	NR
425	2406	NR	555	28230	NR	685	16904	NR	815	1073	NR	945	604	NR
430	4355	NR	560	28678	NR	690	15203	NR	820	977	NR	950	424	NR
435	7911	NR	565	29242	NR	695	13356	NR	825	882	NR	955	550	NR
440	13821	NR	570	29806	NR	700	11948	NR	830	875	NR	960	709	NR
445	19836	NR	575	30322	NR	705	10482	NR	835	944	NR	965	755	NR
450	19902	NR	580	31125	NR	710	9351	NR	840	956	NR	970	426	NR
455	15697	NR	585	31838	NR	715	8217	NR	845	875	NR	975	556	NR
460	13589	NR	590	32845	NR	720	7313	NR	850	801	NR	980	1040	NR
465	11857	NR	595	33487	NR	725	6460	NR	855	890	NR	985	833	NR
470	10336	NR	600	34359	NR	730	5680	NR	860	706	NR	990	964	NR
475	10504	NR	605	35281	NR	735	4904	NR	865	902	NR	995	953	NR
480	11526	NR	610	35679	NR	740	4372	NR	870	879	NR	1000	950	NR
485	12831	NR	615	36113	NR	745	3858	NR	875	769	NR			

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**Scotopic Flux vs. Wavelength**



**Scotopic Lumens: 3109.5**

**S/P: 1.54**

λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)
360	792	NR	490	14205	NR	620	36151	NR	750	3427	NR	880	712	NR
365	640	NR	495	15647	NR	625	36077	NR	755	3047	NR	885	942	NR
370	630	NR	500	17088	NR	630	35451	NR	760	2790	NR	890	952	NR
375	684	NR	505	18475	NR	635	34417	NR	765	2433	NR	895	764	NR
380	731	NR	510	19780	NR	640	33166	NR	770	2178	NR	900	743	NR
385	664	NR	515	21055	NR	645	32124	NR	775	1893	NR	905	776	NR
390	595	NR	520	22268	NR	650	30559	NR	780	1724	NR	910	659	NR
395	520	NR	525	23497	NR	655	28656	NR	785	1549	NR	915	701	NR
400	491	NR	530	24653	NR	660	27033	NR	790	1451	NR	920	728	NR
405	489	NR	535	25661	NR	665	25030	NR	795	1317	NR	925	793	NR
410	585	NR	540	26289	NR	670	22820	NR	800	1124	NR	930	877	NR
415	826	NR	545	26945	NR	675	20678	NR	805	1116	NR	935	923	NR
420	1336	NR	550	27713	NR	680	18748	NR	810	1105	NR	940	1001	NR
425	2406	NR	555	28230	NR	685	16904	NR	815	1073	NR	945	604	NR
430	4355	NR	560	28678	NR	690	15203	NR	820	977	NR	950	424	NR
435	7911	NR	565	29242	NR	695	13356	NR	825	882	NR	955	550	NR
440	13821	NR	570	29806	NR	700	11948	NR	830	875	NR	960	709	NR
445	19836	NR	575	30322	NR	705	10482	NR	835	944	NR	965	755	NR
450	19902	NR	580	31125	NR	710	9351	NR	840	956	NR	970	426	NR
455	15697	NR	585	31838	NR	715	8217	NR	845	875	NR	975	556	NR
460	13589	NR	590	32845	NR	720	7313	NR	850	801	NR	980	1040	NR
465	11857	NR	595	33487	NR	725	6460	NR	855	890	NR	985	833	NR
470	10336	NR	600	34359	NR	730	5680	NR	860	706	NR	990	964	NR
475	10504	NR	605	35281	NR	735	4904	NR	865	902	NR	995	953	NR
480	11526	NR	610	35679	NR	740	4372	NR	870	879	NR	1000	950	NR
485	12831	NR	615	36113	NR	745	3858	NR	875	769	NR			

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**Melanopic Flux vs. Wavelength**



**Melanopic Lumens: 1210.8 S/P: 0.6**

λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)
360	792	NR	490	14205	NR	620	36151	NR	750	3427	NR	880	712	NR
365	640	NR	495	15647	NR	625	36077	NR	755	3047	NR	885	942	NR
370	630	NR	500	17088	NR	630	35451	NR	760	2790	NR	890	952	NR
375	684	NR	505	18475	NR	635	34417	NR	765	2433	NR	895	764	NR
380	731	NR	510	19780	NR	640	33166	NR	770	2178	NR	900	743	NR
385	664	NR	515	21055	NR	645	32124	NR	775	1893	NR	905	776	NR
390	595	NR	520	22268	NR	650	30559	NR	780	1724	NR	910	659	NR
395	520	NR	525	23497	NR	655	28656	NR	785	1549	NR	915	701	NR
400	491	NR	530	24653	NR	660	27033	NR	790	1451	NR	920	728	NR
405	489	NR	535	25661	NR	665	25030	NR	795	1317	NR	925	793	NR
410	585	NR	540	26289	NR	670	22820	NR	800	1124	NR	930	877	NR
415	826	NR	545	26945	NR	675	20678	NR	805	1116	NR	935	923	NR
420	1336	NR	550	27713	NR	680	18748	NR	810	1105	NR	940	1001	NR
425	2406	NR	555	28230	NR	685	16904	NR	815	1073	NR	945	604	NR
430	4355	NR	560	28678	NR	690	15203	NR	820	977	NR	950	424	NR
435	7911	NR	565	29242	NR	695	13356	NR	825	882	NR	955	550	NR
440	13821	NR	570	29806	NR	700	11948	NR	830	875	NR	960	709	NR
445	19836	NR	575	30322	NR	705	10482	NR	835	944	NR	965	755	NR
450	19902	NR	580	31125	NR	710	9351	NR	840	956	NR	970	426	NR
455	15697	NR	585	31838	NR	715	8217	NR	845	875	NR	975	556	NR
460	13589	NR	590	32845	NR	720	7313	NR	850	801	NR	980	1040	NR
465	11857	NR	595	33487	NR	725	6460	NR	855	890	NR	985	833	NR
470	10336	NR	600	34359	NR	730	5680	NR	860	706	NR	990	964	NR
475	10504	NR	605	35281	NR	735	4904	NR	865	902	NR	995	953	NR
480	11526	NR	610	35679	NR	740	4372	NR	870	879	NR	1000	950	NR
485	12831	NR	615	36113	NR	745	3858	NR	875	769	NR			

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**Summary**

$R_f = 92.6$   
 $R_g = 98.3$   
 CIE  $R_a = 92.0$   
 $R_9 = 59.7$

**Spectral Power Distribution Comparison**



**Color Vector Graphics**



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

CES01 = 86	CES26 = 94	CES51 = 97	CES76 = 88
CES02 = 62	CES27 = 93	CES52 = 98	CES77 = 91
CES03 = 31	CES28 = 96	CES53 = 96	CES78 = 87
CES04 = 70	CES29 = 96	CES54 = 95	CES79 = 96
CES05 = 50	CES30 = 97	CES55 = 94	CES80 = 95
CES06 = 51	CES31 = 96	CES56 = 94	CES81 = 88
CES07 = 42	CES32 = 92	CES57 = 93	CES82 = 98
CES08 = 41	CES33 = 98	CES58 = 94	CES83 = 97
CES09 = 29	CES34 = 95	CES59 = 96	CES84 = 95
CES10 = 75	CES35 = 97	CES60 = 94	CES85 = 86
CES11 = 58	CES36 = 87	CES61 = 93	CES86 = 87
CES12 = 64	CES37 = 95	CES62 = 91	CES87 = 92
CES13 = 43	CES38 = 92	CES63 = 93	CES88 = 96
CES14 = 74	CES39 = 99	CES64 = 91	CES89 = 87
CES15 = 71	CES40 = 98	CES65 = 89	CES90 = 96
CES16 = 48	CES41 = 98	CES66 = 89	CES91 = 80
CES17 = 49	CES42 = 96	CES67 = 88	CES92 = 82
CES18 = 56	CES43 = 97	CES68 = 90	CES93 = 89
CES19 = 71	CES44 = 99	CES69 = 91	CES94 = 82
CES20 = 66	CES45 = 98	CES70 = 88	CES95 = 85
CES21 = 86	CES46 = 97	CES71 = 85	CES96 = 92
CES22 = 78	CES47 = 97	CES72 = 95	CES97 = 96
CES23 = 91	CES48 = 93	CES73 = 84	CES98 = 94
CES24 = 90	CES49 = 97	CES74 = 94	CES99 = 91
CES25 = 71	CES50 = 98	CES75 = 86	



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Color Rendition by Hue-Angle Bin



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Measure Comparisons



(END OF REPORT)