

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: P1435642

Luminaire Tested: **GALN-SB9D-930-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: P1435642  
 Test Lab: INNOVATION CENTER(G1)  
 Issue Date: 03/24/202  
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
 Product Line: McGRAW-EDISON  
 Catalog Number: GALN-SB9D-930-U-T4LG  
 Description: GALLEON II AREA AND ROADWAY HIGH DENSITY LUMINAIRE 900mA 9xLight Square PACKAGE 90CRI 3000K FIXTURE w/ TYPE IV LOW GLARE  
 Light Source: (234) 3000K CCT, 90 CRI LEDS  
 Ballast/Driver: ELECTRONIC DRIVER

Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
a	good	reflector
b	good	lens
c	good	housing
d	good	cord

**Summary**

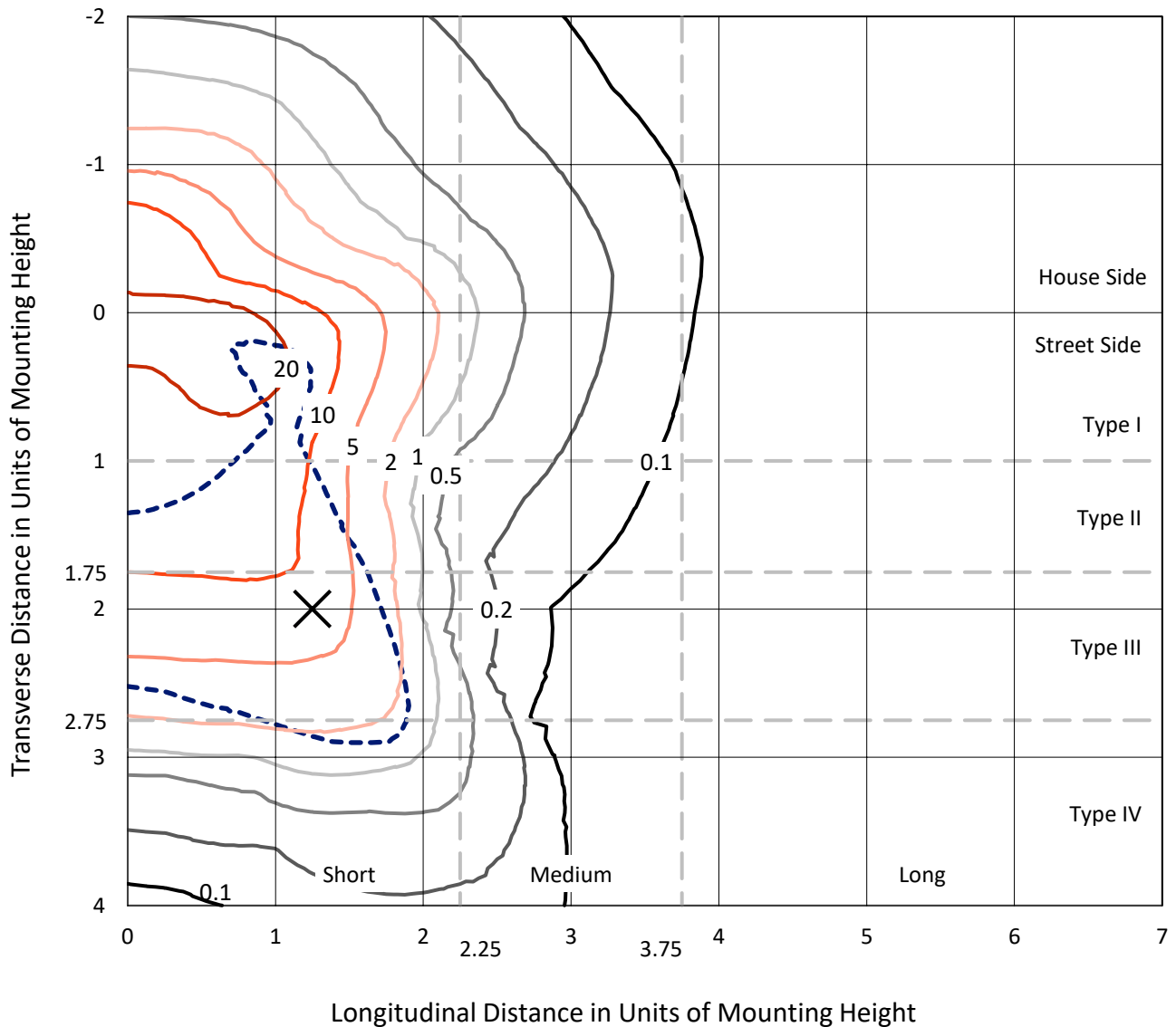
Lumens per Lamp: N/A  
 Luminaire Lumens: 63147.2 lumens  
 Efficiency: N/A  
 Efficacy: 96.0 lumens/watt  
 Luminous Opening: Rectangular (W 1.5' x L: 1.5' x H: 0')  
 IES Classification: Type IV - Short  
 BUG Rating: B4 - U0 - G5

Input Watts (W): 658  
 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: P1435642  
 CATALOG NUMBER: GALN-SB9D-930-U-T4LG

### Iso-Footcandle Lines of Horizontal Illumination

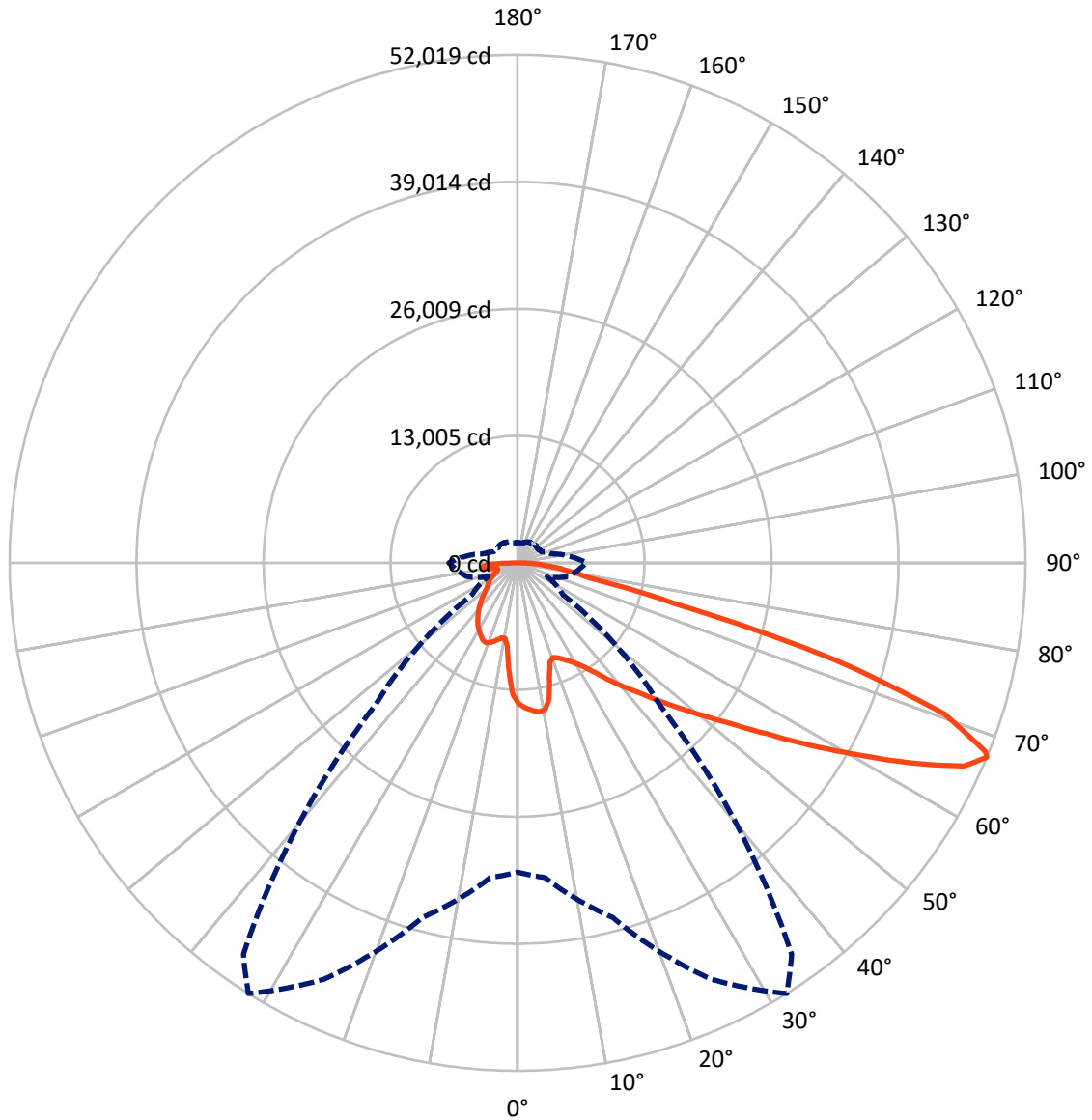
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 39 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	14949.9	0.0	14949.9
	% Fixture	23.7	0.0	23.7
<b>Street Side</b>	Lumens	48197.3	0.0	48197.3
	% Fixture	76.3	0.0	76.3
<b>Total</b>	Lumens	63147.2	0.0	63147.2
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1260.6	2.0
10°-20°	3347.1	5.3
20°-30°	5466.0	8.7
30°-40°	8056.4	12.8
40°-50°	11110.1	17.6
50°-60°	14035.5	22.2
60°-70°	13583.8	21.5
70°-80°	4848.0	7.7
80°-90°	1439.6	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°	63147.2	100.0
0°-180°	63147.2	100.0

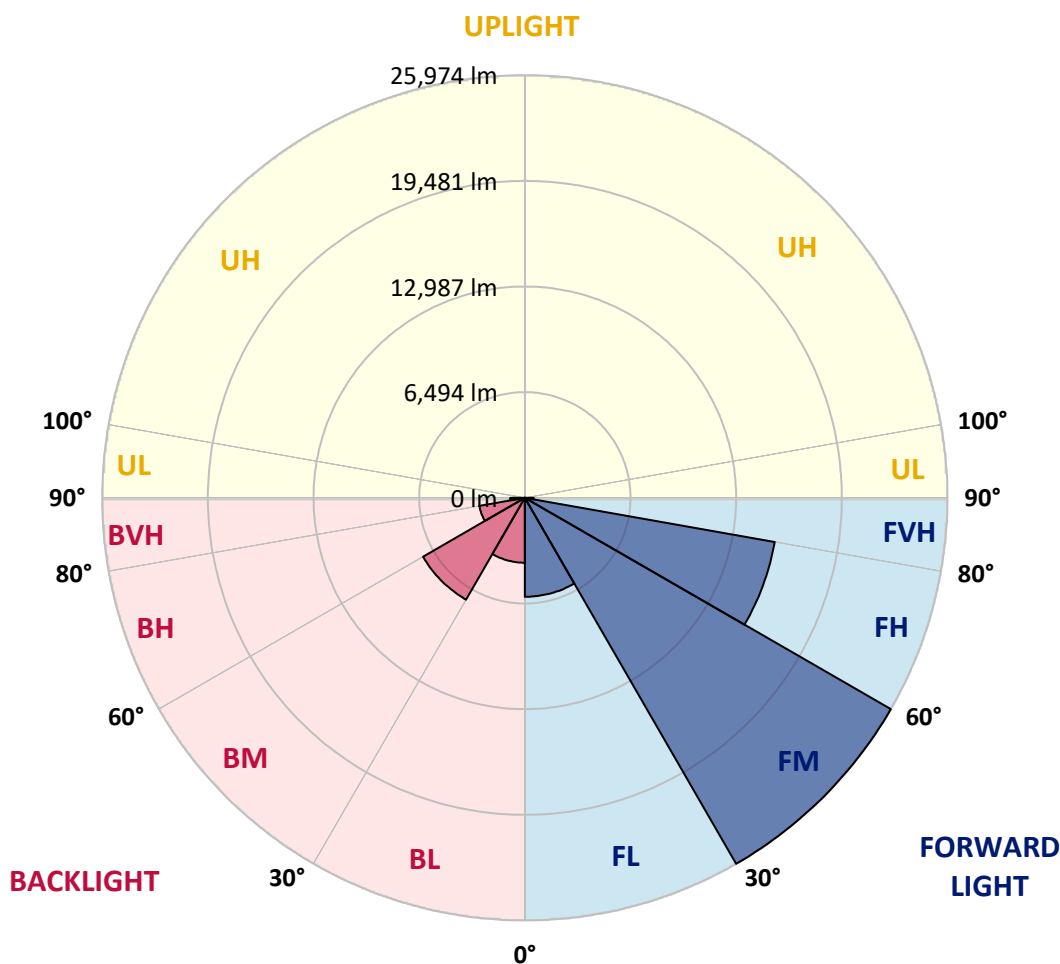


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	6084.4	9.6			
FM (30°-60°)	25974.4	41.1			
FH (60°-80°)	15596.0	24.7			G5
FVH (80°-90°)	542.5	0.9			G4/750
BL (0°-30°)	3989.4	6.3	B4/5000		
BM (30°-60°)	7227.6	11.4	B4/8500		
BH (60°-80°)	2835.8	4.5	B4/5000		G4/5000
BVH (80°-90°)	897.2	1.4			G5
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B4-U0-G5**  
 Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	32°	35°	45°	55°	65°	75°	85°
0°	14427.9	14427.9	14427.9	14427.9	14427.9	14427.9	14427.9	14427.9	14427.9	14427.9	14427.9
2.5°	14974.7	14932.6	14890.6	14918.6	14862.5	14848.5	14778.4	14750.4	14666.2	14652.2	14498.0
5°	15283.2	15199.0	15185.0	15213.1	15157.0	15157.0	15100.9	15058.8	14932.6	14862.5	14638.2
7.5°	15283.2	15269.1	15297.2	15395.3	15409.4	15409.4	15409.4	15423.4	15297.2	15199.0	14848.5
10°	14413.8	14273.6	14582.1	15072.8	15311.2	15451.4	15703.8	15858.0	15759.9	15689.8	15213.1
12.5°	11819.9	11833.9	12324.7	13376.3	14329.7	14736.3	15787.9	16348.8	16390.8	16278.7	15675.8
15°	10025.2	10095.3	10347.7	11104.8	12198.5	12801.4	15297.2	16783.4	17120.0	17007.8	16236.6
17.5°	9478.4	9520.4	9632.6	10067.3	10684.2	11174.9	13965.2	17063.9	18003.3	17863.1	16867.6
20°	9394.2	9422.3	9562.5	9927.0	10347.7	10628.1	12605.1	16839.5	18830.5	18774.5	17442.4
22.5°	9408.3	9436.3	9618.6	10123.3	10558.0	10796.4	12170.4	16320.7	19699.9	19755.9	18031.3
25°	9436.3	9450.3	9730.8	10403.8	10950.6	11245.0	12450.9	15858.0	20429.0	20905.7	18676.3
27.5°	9590.5	9632.6	10011.2	10768.3	11413.3	11749.8	13109.9	16012.3	21228.2	22209.7	19447.5
30°	10011.2	10039.2	10501.9	11287.1	11988.2	12338.7	13895.1	16629.2	22209.7	23555.7	20204.6
32.5°	10670.2	10698.2	11231.0	12044.3	12801.4	13222.0	14918.6	17807.0	23303.3	24971.9	20961.8
35°	11581.6	11595.6	12198.5	13067.8	13867.0	14343.7	16110.4	19139.0	24439.0	26177.7	21522.6
37.5°	12661.2	12759.3	13376.3	14287.7	15227.1	15661.7	17512.5	20695.4	25448.6	27201.2	21845.1
40°	14147.4	14175.5	14778.4	15661.7	16657.3	17077.9	18914.7	22167.6	26556.3	27804.1	22139.6
42.5°	15675.8	15914.1	16418.9	17400.4	18143.5	18480.0	20513.1	23513.6	27439.6	27832.2	22013.4
45°	17722.9	17905.1	18409.9	19279.2	20022.4	20414.9	22237.7	24747.5	27888.3	27593.8	21732.9
47.5°	20064.4	20176.6	20583.2	21368.4	22195.6	22476.1	24032.4	25448.6	28056.5	27425.6	21606.8
50°	22826.6	22826.6	23121.0	23794.1	24551.2	24943.8	25686.9	25869.2	28547.3	27131.1	21929.2
52.5°	25154.1	25266.3	25658.9	26612.3	27369.5	27818.2	26976.9	26514.2	27551.8	25490.6	22027.4
55°	27383.5	27509.7	28393.0	29584.8	30874.8	31365.5	28589.3	26191.7	24200.7	23093.0	21354.4
57.5°	29514.7	29781.1	30888.8	33216.4	35165.3	35123.2	30636.4	23303.3	19755.9	20443.0	19882.1
60°	32487.2	32767.7	34534.4	37464.8	39848.4	38852.9	30664.5	19391.4	15395.3	16320.7	17120.0
62.5°	34969.0	35445.7	38039.7	42919.1	45106.4	43550.0	28126.6	14848.5	10221.5	11385.3	13236.1
65°	34744.7	35375.6	39399.7	46929.1	50196.1	48751.9	24411.0	9394.2	5272.0	7781.8	9268.0
67°	31688.0	32375.1	37591.0	47069.4	52018.9	48934.2	20611.2	5678.6	3351.1	5398.2	6435.8
67.5°	29935.4	30944.9	36693.6	46802.9	51682.3	48163.0	18900.7	4753.2	3154.8	5019.6	5860.9
70°	18409.9	20036.4	27537.7	41376.7	46326.2	40311.1	10501.9	2692.1	2565.9	3365.1	4052.1
72.5°	5538.4	6029.1	10628.1	26542.2	34001.5	29879.3	4725.2	2075.1	2299.5	2706.1	3126.7
75°	2692.1	2874.4	4388.7	10852.5	16559.1	16475.0	2636.0	1780.7	2131.2	2271.4	2467.7
77.5°	1724.6	1836.8	2734.1	6071.2	7585.5	6758.2	1906.9	1556.4	1892.9	1864.8	1836.8
80°	1079.6	1135.7	1752.7	3519.3	5594.5	4669.1	1402.1	1275.9	1626.5	1444.2	1304.0
82.5°	701.1	771.2	1121.7	2145.3	3996.1	3477.3	925.4	911.4	1346.0	1149.7	1009.5
85°	462.7	518.8	715.1	1261.9	2369.6	2481.8	602.9	631.0	1037.6	869.3	771.2
87.5°	168.3	210.3	364.6	560.9	1107.7	1374.1	252.4	238.4	504.8	406.6	322.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	14427.9	14427.9	14427.9	14427.9	14427.9	14427.9	14427.9	14427.9	14427.9	14427.9	14427.9
2.5°	14469.9	14427.9	14231.6	14063.3	13937.1	13768.9	13586.6	13376.3	13236.1	13264.1	13222.0
5°	14540.0	14427.9	14049.3	13474.4	12913.6	12212.5	11315.2	10782.3	10375.7	10165.4	10221.5
7.5°	14694.3	14498.0	13698.8	12535.0	11076.8	9646.6	8763.3	8258.5	8020.2	7922.0	7908.0
10°	14960.7	14624.2	13250.1	11076.8	9169.9	8202.4	7879.9	7739.7	7711.7	7711.7	7697.7
12.5°	15283.2	14750.4	12492.9	9660.6	8258.5	7908.0	7851.9	7865.9	7908.0	7950.1	7879.9
15°	15675.8	14806.4	11553.5	8805.3	8076.2	7992.1	8076.2	8174.4	8244.5	8300.6	8230.5
17.5°	16068.4	14750.4	10670.2	8398.7	8104.3	8216.5	8384.7	8538.9	8581.0	8665.1	8609.1
20°	16348.8	14554.1	9913.0	8244.5	8174.4	8426.8	8637.1	8805.3	8889.5	8945.6	8889.5
22.5°	16559.1	14301.7	9366.2	8090.3	8174.4	8482.9	8735.2	8931.5	9029.7	9085.8	9015.7
25°	16741.4	13951.1	8945.6	7865.9	8006.1	8300.6	8581.0	8777.3	8917.5	9001.6	8959.6
27.5°	16965.7	13670.7	8553.0	7529.4	7655.6	7936.0	8230.5	8468.8	8735.2	8875.5	8847.4
30°	17218.1	13530.5	8174.4	7164.9	7249.0	7529.4	7879.9	8202.4	8567.0	8749.3	8749.3
32.5°	17512.5	13432.4	7823.9	6814.3	6884.4	7192.9	7529.4	7823.9	8216.5	8510.9	8496.9
35°	17638.7	13320.2	7543.4	6491.8	6632.1	6884.4	7150.8	7347.1	7753.8	8104.3	8132.3
37.5°	17764.9	13278.1	7403.2	6239.5	6351.6	6547.9	6688.1	6786.3	7164.9	7529.4	7543.4
40°	17919.2	13474.4	7501.4	6071.2	5973.1	6169.4	6239.5	6295.5	6491.8	6730.2	6730.2
42.5°	17821.0	13614.6	7725.7	5917.0	5510.4	5734.7	5762.7	5748.7	5762.7	5776.8	5762.7
45°	17568.6	13474.4	7725.7	5678.6	5019.6	5258.0	5243.9	5173.8	5061.7	4767.2	4725.2
47.5°	17512.5	13390.3	7431.3	5286.0	4528.9	4725.2	4753.2	4613.0	4290.5	3982.0	3883.9
50°	17750.9	13544.5	6968.6	4809.3	4108.2	4276.5	4346.6	4108.2	3743.7	3421.2	3365.1
52.5°	18101.4	13740.8	6295.5	4290.5	3757.7	3926.0	4010.1	3743.7	3365.1	3112.7	3084.7
55°	18059.4	13740.8	5538.4	3813.8	3491.3	3617.5	3757.7	3477.3	3182.8	3042.6	3028.6
57.5°	17148.0	13222.0	4977.5	3477.3	3238.9	3351.1	3533.4	3267.0	2986.5	3014.6	3056.6
60°	15367.3	11876.0	4556.9	3252.9	3014.6	3126.7	3323.0	3014.6	2650.0	2551.9	2551.9
62.5°	12661.2	9786.8	4220.4	3028.6	2804.3	2944.5	3042.6	2636.0	2397.6	2285.5	2285.5
65°	9492.4	7571.5	3869.9	2846.3	2622.0	2776.2	2664.0	2467.7	2229.4	2145.3	2159.3
67°	7038.7	5874.9	3575.4	2692.1	2509.8	2579.9	2495.8	2355.6	2117.2	2047.1	2117.2
67.5°	6323.6	5580.5	3505.3	2650.0	2481.8	2537.8	2453.7	2341.5	2089.2	2019.1	2089.2
70°	4346.6	4290.5	3126.7	2453.7	2327.5	2271.4	2313.5	2173.3	1963.0	1934.9	2005.0
72.5°	3309.0	3421.2	2804.3	2285.5	2159.3	2089.2	2187.3	2047.1	1836.8	1878.8	1949.0
75°	2593.9	2762.2	2509.8	2047.1	1963.0	1977.0	2173.3	2117.2	1949.0	1991.0	2005.0
77.5°	1920.9	2229.4	2145.3	1780.7	1710.6	1906.9	2453.7	2622.0	2327.5	2257.4	2159.3
80°	1402.1	1598.4	1808.7	1472.2	1430.2	1836.8	3028.6	3351.1	2874.4	2593.9	2523.8
82.5°	1037.6	1121.7	1486.3	1177.8	1037.6	1640.5	3365.1	3940.0	3421.2	2888.4	2804.3
85°	743.1	869.3	1177.8	869.3	687.0	1346.0	3295.0	3855.8	3393.1	2734.1	2664.0
87.5°	266.4	378.6	504.8	392.6	350.5	925.4	2720.1	2776.2	2117.2	967.5	981.5
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: SP1-2106-271-2

Luminaire Tested: GFLD-SA1-A-930-U-WR-X-BK

Test Date: 06/16/2021

**Test Information**

Test Method: LM-79-08  
 Report Number: SP1-2106-271-2  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1  
 Measurement Geometry: 4π  
 Issue Date: 06/16/2021  
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
 Product Line: MCGRAW-EDISON  
 Catalog Number: **GFLD-SA1-A-930-U-WR-X-BK**  
 Description: MCGRAW EDISON

N6, BLACK

**Spectral Parameters**

CCT (K): 3038  
 CIE u': 0.2481  
 CIE v': 0.5247  
 Duv: 0.0030  
 CIE x: 0.4384  
 CIE y: 0.4121  
 CIE z: 0.1495  
 Peak Wavelength (nm): 624  
 Dominant Wavelength (nm): 581  
 Purity: 55.6  
 Rf: 92.8  
 Rg: 98

CRI (Ra): 92.3

R1: 92.0	R9: 58.9
R2: 94.8	R10: 87.0
R3: 96.7	R11: 93.2
R4: 93.0	R12: 81.1
R5: 91.4	R13: 92.5
R6: 93.7	R14: 97.4
R7: 93.9	
R8: 82.9	

**Test Conditions**  
 Stabilization Time: 82M  
 Operation Time: 12H  
 Room Temperature (°C) / RH%: 24.3/43%  
 Sphere Temperature (°C): 24.2



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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 3000K 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	718	NR	490	11837	NR	620	36553	NR	750	3581	NR	880	702	NR
365	573	NR	495	13045	NR	625	36706	NR	755	3240	NR	885	837	NR
370	566	NR	500	14286	NR	630	35946	NR	760	2875	NR	890	938	NR
375	689	NR	505	15591	NR	635	35109	NR	765	2561	NR	895	722	NR
380	659	NR	510	16757	NR	640	33848	NR	770	2263	NR	900	712	NR
385	616	NR	515	17969	NR	645	32907	NR	775	1981	NR	905	660	NR
390	575	NR	520	19153	NR	650	31426	NR	780	1758	NR	910	722	NR
395	507	NR	525	20279	NR	655	29538	NR	785	1656	NR	915	683	NR
400	452	NR	530	21424	NR	660	27902	NR	790	1510	NR	920	536	NR
405	442	NR	535	22450	NR	665	25950	NR	795	1317	NR	925	653	NR
410	492	NR	540	23201	NR	670	23596	NR	800	1296	NR	930	693	NR
415	658	NR	545	23916	NR	675	21412	NR	805	1239	NR	935	1009	NR
420	1015	NR	550	24774	NR	680	19353	NR	810	1094	NR	940	1041	NR
425	1715	NR	555	25531	NR	685	17528	NR	815	1156	NR	945	716	NR
430	3048	NR	560	26160	NR	690	15706	NR	820	966	NR	950	700	NR
435	5481	NR	565	26923	NR	695	13845	NR	825	931	NR	955	812	NR
440	9614	NR	570	27732	NR	700	12373	NR	830	938	NR	960	505	NR
445	14315	NR	575	28529	NR	705	10898	NR	835	822	NR	965	551	NR
450	14893	NR	580	29552	NR	710	9649	NR	840	838	NR	970	824	NR
455	11988	NR	585	30530	NR	715	8554	NR	845	759	NR	975	814	NR
460	10638	NR	590	31835	NR	720	7611	NR	850	712	NR	980	926	NR
465	9480	NR	595	32776	NR	725	6679	NR	855	651	NR	985	954	NR
470	8416	NR	600	33912	NR	730	5833	NR	860	789	NR	990	814	NR
475	8624	NR	605	35057	NR	735	5111	NR	865	715	NR	995	765	NR
480	9529	NR	610	35715	NR	740	4579	NR	870	935	NR	1000	954	NR
485	10656	NR	615	36371	NR	745	4054	NR	875	919	NR			

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**Scotopic Flux vs. Wavelength**



**Scotopic Lumens: 2650.8**

**S/P: 1.41**

$\lambda$ (nm)	Power ( $\mu\text{W}/\text{nm}$ )	Lumens ( $\phi/\text{nm}$ )	$\lambda$ (nm)	Power ( $\mu\text{W}/\text{nm}$ )	Lumens ( $\phi/\text{nm}$ )	$\lambda$ (nm)	Power ( $\mu\text{W}/\text{nm}$ )	Lumens ( $\phi/\text{nm}$ )	$\lambda$ (nm)	Power ( $\mu\text{W}/\text{nm}$ )	Lumens ( $\phi/\text{nm}$ )	$\lambda$ (nm)	Power ( $\mu\text{W}/\text{nm}$ )	Lumens ( $\phi/\text{nm}$ )
360	718	NR	490	11837	NR	620	36553	NR	750	3581	NR	880	702	NR
365	573	NR	495	13045	NR	625	36706	NR	755	3240	NR	885	837	NR
370	566	NR	500	14286	NR	630	35946	NR	760	2875	NR	890	938	NR
375	689	NR	505	15591	NR	635	35109	NR	765	2561	NR	895	722	NR
380	659	NR	510	16757	NR	640	33848	NR	770	2263	NR	900	712	NR
385	616	NR	515	17969	NR	645	32907	NR	775	1981	NR	905	660	NR
390	575	NR	520	19153	NR	650	31426	NR	780	1758	NR	910	722	NR
395	507	NR	525	20279	NR	655	29538	NR	785	1656	NR	915	683	NR
400	452	NR	530	21424	NR	660	27902	NR	790	1510	NR	920	536	NR
405	442	NR	535	22450	NR	665	25950	NR	795	1317	NR	925	653	NR
410	492	NR	540	23201	NR	670	23596	NR	800	1296	NR	930	693	NR
415	658	NR	545	23916	NR	675	21412	NR	805	1239	NR	935	1009	NR
420	1015	NR	550	24774	NR	680	19353	NR	810	1094	NR	940	1041	NR
425	1715	NR	555	25531	NR	685	17528	NR	815	1156	NR	945	716	NR
430	3048	NR	560	26160	NR	690	15706	NR	820	966	NR	950	700	NR
435	5481	NR	565	26923	NR	695	13845	NR	825	931	NR	955	812	NR
440	9614	NR	570	27732	NR	700	12373	NR	830	938	NR	960	505	NR
445	14315	NR	575	28529	NR	705	10898	NR	835	822	NR	965	551	NR
450	14893	NR	580	29552	NR	710	9649	NR	840	838	NR	970	824	NR
455	11988	NR	585	30530	NR	715	8554	NR	845	759	NR	975	814	NR
460	10638	NR	590	31835	NR	720	7611	NR	850	712	NR	980	926	NR
465	9480	NR	595	32776	NR	725	6679	NR	855	651	NR	985	954	NR
470	8416	NR	600	33912	NR	730	5833	NR	860	789	NR	990	814	NR
475	8624	NR	605	35057	NR	735	5111	NR	865	715	NR	995	765	NR
480	9529	NR	610	35715	NR	740	4579	NR	870	935	NR	1000	954	NR
485	10656	NR	615	36371	NR	745	4054	NR	875	919	NR			

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**Melanopic Flux vs. Wavelength**



**Melanopic Lumens: 1008.8 S/P: 0.54**

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	718	NR	490	11837	NR	620	36553	NR	750	3581	NR	880	702	NR
365	573	NR	495	13045	NR	625	36706	NR	755	3240	NR	885	837	NR
370	566	NR	500	14286	NR	630	35946	NR	760	2875	NR	890	938	NR
375	689	NR	505	15591	NR	635	35109	NR	765	2561	NR	895	722	NR
380	659	NR	510	16757	NR	640	33848	NR	770	2263	NR	900	712	NR
385	616	NR	515	17969	NR	645	32907	NR	775	1981	NR	905	660	NR
390	575	NR	520	19153	NR	650	31426	NR	780	1758	NR	910	722	NR
395	507	NR	525	20279	NR	655	29538	NR	785	1656	NR	915	683	NR
400	452	NR	530	21424	NR	660	27902	NR	790	1510	NR	920	536	NR
405	442	NR	535	22450	NR	665	25950	NR	795	1317	NR	925	653	NR
410	492	NR	540	23201	NR	670	23596	NR	800	1296	NR	930	693	NR
415	658	NR	545	23916	NR	675	21412	NR	805	1239	NR	935	1009	NR
420	1015	NR	550	24774	NR	680	19353	NR	810	1094	NR	940	1041	NR
425	1715	NR	555	25531	NR	685	17528	NR	815	1156	NR	945	716	NR
430	3048	NR	560	26160	NR	690	15706	NR	820	966	NR	950	700	NR
435	5481	NR	565	26923	NR	695	13845	NR	825	931	NR	955	812	NR
440	9614	NR	570	27732	NR	700	12373	NR	830	938	NR	960	505	NR
445	14315	NR	575	28529	NR	705	10898	NR	835	822	NR	965	551	NR
450	14893	NR	580	29552	NR	710	9649	NR	840	838	NR	970	824	NR
455	11988	NR	585	30530	NR	715	8554	NR	845	759	NR	975	814	NR
460	10638	NR	590	31835	NR	720	7611	NR	850	712	NR	980	926	NR
465	9480	NR	595	32776	NR	725	6679	NR	855	651	NR	985	954	NR
470	8416	NR	600	33912	NR	730	5833	NR	860	789	NR	990	814	NR
475	8624	NR	605	35057	NR	735	5111	NR	865	715	NR	995	765	NR
480	9529	NR	610	35715	NR	740	4579	NR	870	935	NR	1000	954	NR
485	10656	NR	615	36371	NR	745	4054	NR	875	919	NR			

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**Summary**

$R_f = 92.8$   
 $R_g = 98$   
 CIE  $R_a = 92.3$   
 $R_9 = 58.9$



**Color Vector Graphics**



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

CES01 = 86	CES26 = 94	CES51 = 97	CES76 = 90
CES02 = 63	CES27 = 94	CES52 = 98	CES77 = 92
CES03 = 32	CES28 = 97	CES53 = 96	CES78 = 88
CES04 = 70	CES29 = 96	CES54 = 95	CES79 = 95
CES05 = 50	CES30 = 97	CES55 = 94	CES80 = 95
CES06 = 51	CES31 = 97	CES56 = 94	CES81 = 85
CES07 = 43	CES32 = 92	CES57 = 93	CES82 = 98
CES08 = 42	CES33 = 99	CES58 = 94	CES83 = 97
CES09 = 29	CES34 = 96	CES59 = 96	CES84 = 95
CES10 = 76	CES35 = 98	CES60 = 95	CES85 = 86
CES11 = 58	CES36 = 88	CES61 = 94	CES86 = 85
CES12 = 65	CES37 = 95	CES62 = 92	CES87 = 93
CES13 = 44	CES38 = 93	CES63 = 93	CES88 = 96
CES14 = 74	CES39 = 99	CES64 = 91	CES89 = 87
CES15 = 72	CES40 = 98	CES65 = 89	CES90 = 96
CES16 = 48	CES41 = 98	CES66 = 90	CES91 = 82
CES17 = 50	CES42 = 97	CES67 = 89	CES92 = 82
CES18 = 57	CES43 = 98	CES68 = 91	CES93 = 89
CES19 = 72	CES44 = 99	CES69 = 92	CES94 = 81
CES20 = 67	CES45 = 99	CES70 = 89	CES95 = 86
CES21 = 86	CES46 = 97	CES71 = 87	CES96 = 93
CES22 = 79	CES47 = 96	CES72 = 95	CES97 = 96
CES23 = 92	CES48 = 93	CES73 = 86	CES98 = 94
CES24 = 90	CES49 = 97	CES74 = 93	CES99 = 91
CES25 = 72	CES50 = 98	CES75 = 88	



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Color Rendition by Hue-Angle Bin



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Measure Comparisons



(END OF REPORT)