

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: FAIL-SAFE

Report Number: P489186

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-5HI-40-120-EDD-90**

Issue Date: 3/11/2021

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.



**Test Information**

Test Method: LM-79-08  
Report Number: P489186  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2101-115-8)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/11/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: CLM-24-2-INS-A19156-LD4-5HI-40-120-EDD-90  
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

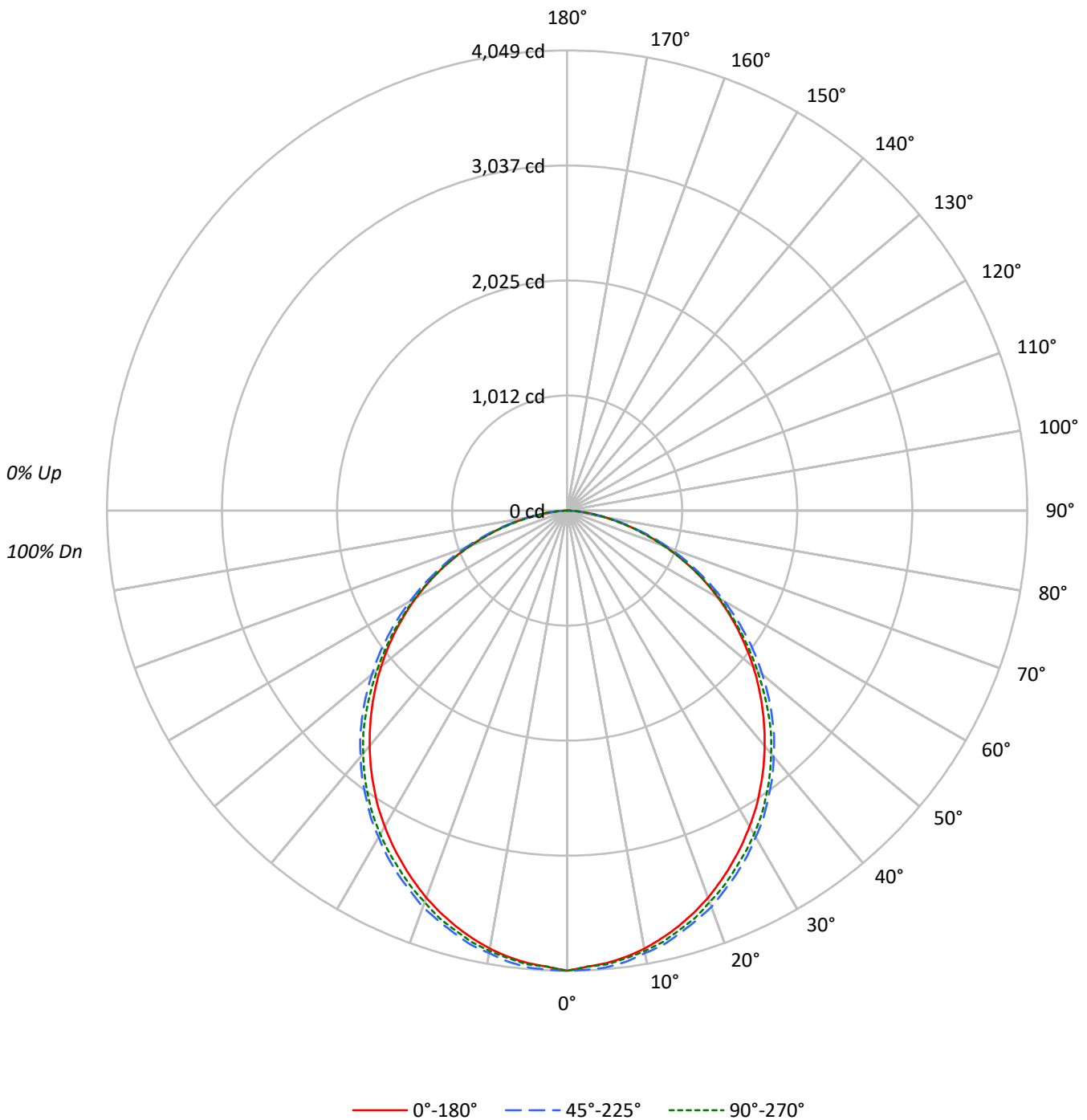
Lumens per Lamp: N/A  
Luminaire Lumens: 10644.2 lumens  
Efficiency: N/A  
Efficacy: 98.6 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 108  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT

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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	105	100	97	106	102	98	95	98	95	92	94	92	89	91	88	87	85
2	99	91	85	79	97	90	83	78	86	81	76	83	78	75	80	76	73	71
3	91	80	72	66	88	79	71	65	76	70	64	73	68	63	71	66	62	60
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51
5	77	64	55	48	75	63	54	48	61	53	48	59	52	47	57	51	47	45
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39
7	66	52	44	38	64	51	43	37	50	43	37	49	42	37	47	41	37	35
8	61	48	39	34	60	47	39	33	46	38	33	45	38	33	43	37	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	35	30	40	34	30	28
10	54	41	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	10895	10895	10895
5°	10794	10896	10828
10°	10695	10804	10752
15°	10547	10717	10642
20°	10381	10628	10500
25°	10179	10474	10354
30°	9973	10311	10217
35°	9748	10135	10041
40°	9496	9933	9806
45°	9229	9694	9511
50°	8951	9384	9139
55°	8626	9030	8753
60°	8259	8602	8336
65°	7784	8082	7789
70°	7162	7451	7083
75°	6307	6592	6210
80°	5125	5348	5066
85°	3569	3804	3711



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	381.3	3.6
10°-20°	1080.5	10.2
20°-30°	1611.6	15.1
30°-40°	1909.7	17.9
40°-50°	1932.4	18.2
50°-60°	1687.6	15.9
60°-70°	1233.2	11.6
70°-80°	656.2	6.2
80°-90°	151.7	1.4
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°-30°	3073.4	28.9
0°-40°	4983.1	46.8
0°-60°	8603.1	80.8
0°-90°	10644.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10644.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4049	4049	4049	4049	4049	
5°	3996	4004	4034	4043	4009	379
15°	3786	3811	3847	3870	3820	1067
25°	3428	3470	3528	3541	3487	1579
35°	2968	3014	3085	3107	3056	1856
45°	2425	2468	2547	2550	2499	1871
55°	1839	1876	1925	1897	1866	1644
65°	1222	1247	1269	1244	1223	1210
75°	607	620	634	611	597	645
85°	116	118	123	124	120	146
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4048.7	4048.7	4048.7	4048.7	4048.7
2.5°	4017.0	4030.1	4043.6	4049.5	4016.6
5°	3995.9	4003.5	4033.5	4042.8	4008.6
7.5°	3961.4	3972.7	4001.9	4006.1	3973.2
10°	3914.1	3934.4	3953.8	3974.9	3934.8
12.5°	3853.8	3881.2	3914.1	3917.9	3887.5
15°	3785.9	3811.2	3847.0	3870.2	3820.0
17.5°	3709.9	3734.4	3780.8	3785.0	3754.7
20°	3625.2	3655.5	3711.2	3720.9	3666.5
22.5°	3529.0	3569.9	3616.3	3625.6	3585.5
25°	3428.2	3470.4	3527.7	3540.8	3487.2
27.5°	3322.7	3363.2	3427.7	3437.0	3391.9
30°	3209.7	3247.6	3318.5	3334.1	3288.1
32.5°	3094.9	3132.9	3211.4	3224.4	3179.7
35°	2967.5	3013.9	3085.2	3106.7	3056.5
37.5°	2837.6	2882.8	2963.7	2983.1	2929.2
40°	2703.1	2747.8	2827.5	2843.5	2791.6
42.5°	2565.5	2610.3	2695.5	2698.0	2655.0
45°	2425.1	2468.1	2547.4	2549.5	2499.3
47.5°	2282.5	2325.9	2396.8	2388.8	2341.5
50°	2138.2	2179.6	2241.6	2225.5	2182.9
52.5°	1988.9	2029.0	2087.6	2061.5	2021.4
55°	1838.7	1875.9	1924.8	1896.9	1865.7
57.5°	1687.3	1724.8	1762.4	1734.1	1707.1
60°	1534.6	1567.5	1598.3	1569.6	1548.9
62.5°	1379.4	1407.6	1434.2	1406.8	1387.4
65°	1222.4	1247.3	1269.3	1244.0	1223.3
67.5°	1066.4	1087.5	1107.7	1081.6	1060.0
70°	910.3	928.4	947.0	920.0	900.2
72.5°	756.3	772.4	788.8	762.7	745.4
75°	606.6	620.5	634.0	610.8	597.3
77.5°	463.6	475.4	484.7	469.9	456.8
80°	330.7	339.6	345.1	339.1	326.9
82.5°	212.6	218.9	221.9	221.5	213.4
85°	115.6	117.7	123.2	124.4	120.2
87.5°	44.7	47.7	48.9	52.7	48.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)