

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: P489213

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-5STD-50-120-EDD**

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: P489213  
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-LD4-5STD-50-120-EDD  
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

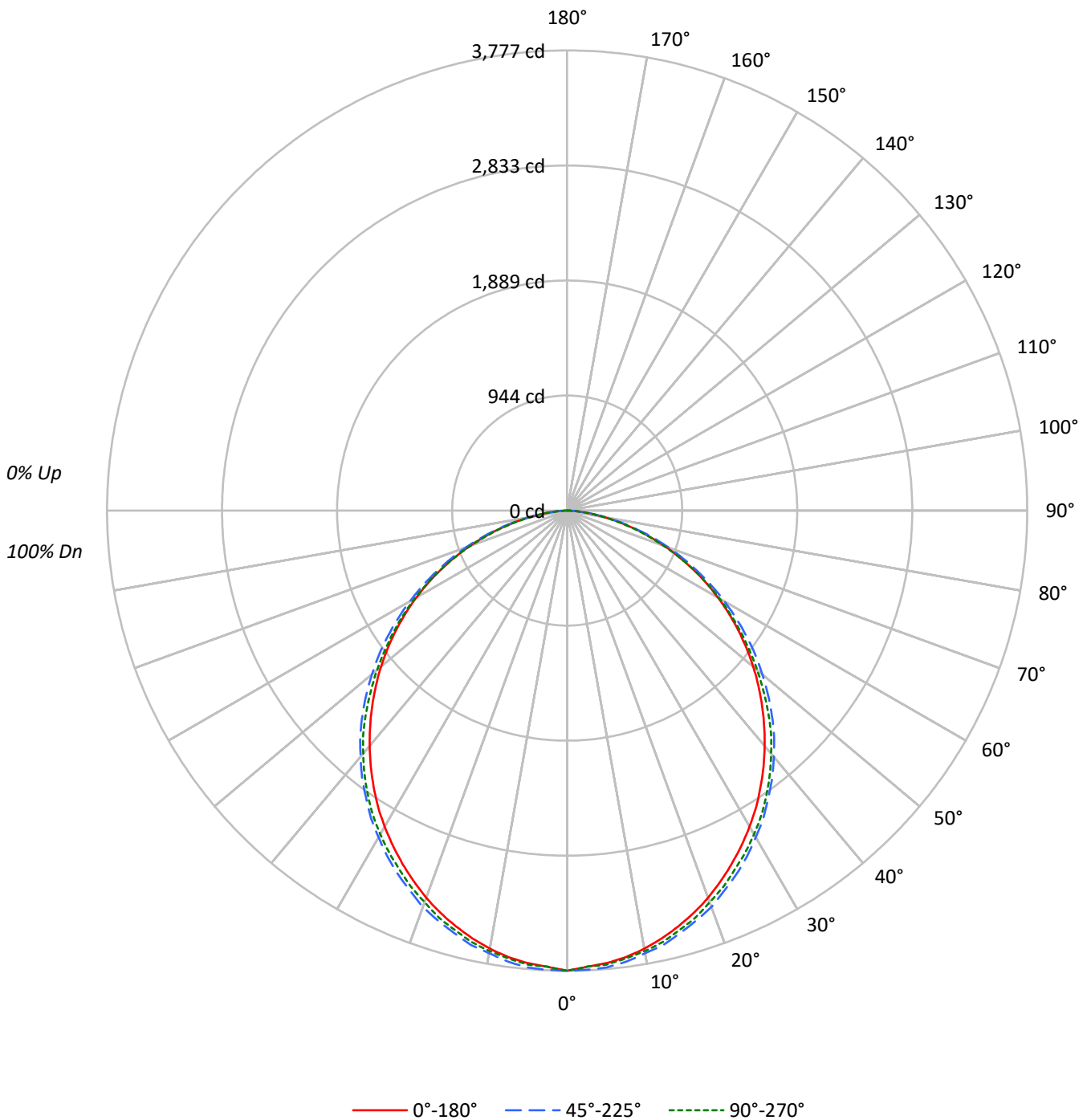
Lumens per Lamp: N/A  
Luminaire Lumens: 9930.8 lumens  
Efficiency: N/A  
Efficacy: 119.4 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 83.2  
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°	10165	10165	10165
5°	10071	10165	10102
10°	9979	10080	10031
15°	9840	9999	9929
20°	9686	9915	9796
25°	9497	9772	9660
30°	9305	9620	9532
35°	9095	9456	9368
40°	8859	9267	9149
45°	8610	9045	8874
50°	8351	8755	8526
55°	8048	8425	8167
60°	7705	8026	7777
65°	7262	7540	7267
70°	6682	6951	6607
75°	5884	6150	5794
80°	4781	4988	4727
85°	3328	3548	3464



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	355.7	3.6
10°-20°	1008.1	10.2
20°-30°	1503.6	15.1
30°-40°	1781.7	17.9
40°-50°	1802.8	18.2
50°-60°	1574.5	15.9
60°-70°	1150.6	11.6
70°-80°	612.2	6.2
80°-90°	141.5	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
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0°-30°	2867.4	28.9
0°-40°	4649.1	46.8
0°-60°	8026.5	80.8
0°-90°	9930.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9930.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3777	3777	3777	3777	3777	
5°	3728	3735	3763	3772	3740	354
15°	3532	3556	3589	3611	3564	996
25°	3198	3238	3291	3304	3254	1474
35°	2769	2812	2878	2898	2852	1731
45°	2262	2303	2377	2379	2332	1745
55°	1716	1750	1796	1770	1741	1533
65°	1140	1164	1184	1161	1141	1129
75°	566	579	592	570	557	602
85°	108	110	115	116	112	137
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3777.3	3777.3	3777.3	3777.3	3777.3
2.5°	3747.8	3760.0	3772.6	3778.1	3747.4
5°	3728.1	3735.2	3763.2	3771.8	3739.9
7.5°	3695.9	3706.5	3733.6	3737.6	3706.9
10°	3651.8	3670.7	3688.8	3708.5	3671.1
12.5°	3595.5	3621.1	3651.8	3655.3	3627.0
15°	3532.1	3555.8	3589.2	3610.8	3564.0
17.5°	3461.3	3484.1	3527.4	3531.4	3503.0
20°	3382.2	3410.5	3462.5	3471.5	3420.8
22.5°	3292.5	3330.6	3373.9	3382.6	3345.2
25°	3198.4	3237.8	3291.3	3303.5	3253.5
27.5°	3100.0	3137.8	3198.0	3206.7	3164.6
30°	2994.5	3030.0	3096.1	3110.6	3067.7
32.5°	2887.5	2922.9	2996.1	3008.3	2966.6
35°	2768.6	2811.9	2878.4	2898.5	2851.7
37.5°	2647.4	2689.5	2765.1	2783.2	2732.8
40°	2521.9	2563.6	2638.0	2652.9	2604.5
42.5°	2393.6	2435.3	2514.8	2517.2	2477.0
45°	2262.5	2302.7	2376.7	2378.6	2331.8
47.5°	2129.5	2170.1	2236.2	2228.7	2184.6
50°	1994.9	2033.5	2091.3	2076.4	2036.6
52.5°	1855.6	1893.0	1947.7	1923.3	1885.9
55°	1715.5	1750.1	1795.8	1769.8	1740.7
57.5°	1574.2	1609.2	1644.3	1617.9	1592.7
60°	1431.7	1462.4	1491.2	1464.4	1445.1
62.5°	1286.9	1313.3	1338.1	1312.5	1294.4
65°	1140.5	1163.7	1184.2	1160.6	1141.3
67.5°	994.9	1014.6	1033.5	1009.1	989.0
70°	849.3	866.2	883.5	858.3	839.8
72.5°	705.6	720.6	735.9	711.5	695.4
75°	565.9	578.9	591.5	569.9	557.3
77.5°	432.5	443.5	452.2	438.4	426.2
80°	308.5	316.8	321.9	316.4	305.0
82.5°	198.4	204.3	207.0	206.6	199.1
85°	107.8	109.8	114.9	116.1	112.2
87.5°	41.7	44.5	45.7	49.2	45.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)