

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: P489680

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-3STD-50-120-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: P489680  
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-24-4-INS-A19156-LD4-3STD-50-120-EDD-90  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

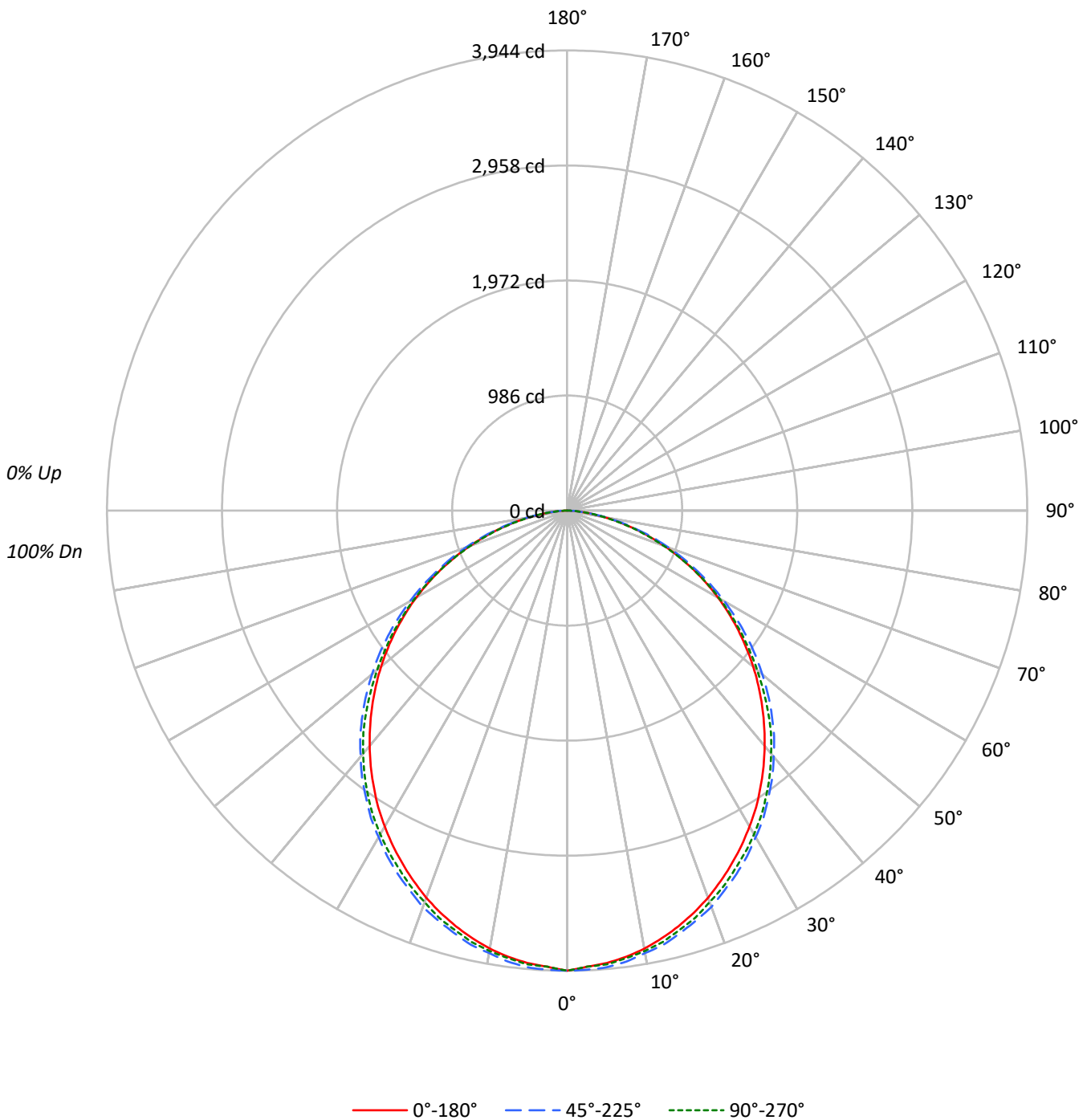
Lumens per Lamp: N/A  
Luminaire Lumens: 10368.2 lumens  
Efficiency: N/A  
Efficacy: 103.8 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 99.9  
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°	5306	5306	5306
5°	5257	5306	5274
10°	5209	5262	5237
15°	5137	5220	5183
20°	5056	5176	5114
25°	4957	5101	5043
30°	4857	5022	4976
35°	4748	4936	4890
40°	4625	4838	4776
45°	4495	4721	4632
50°	4360	4571	4451
55°	4202	4398	4263
60°	4022	4190	4060
65°	3791	3936	3794
70°	3488	3629	3449
75°	3072	3211	3025
80°	2496	2604	2467
85°	1738	1853	1808



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	371.4	3.6
10°-20°	1052.5	10.2
20°-30°	1569.8	15.1
30°-40°	1860.2	17.9
40°-50°	1882.2	18.2
50°-60°	1643.9	15.9
60°-70°	1201.3	11.6
70°-80°	639.2	6.2
80°-90°	147.7	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°	2993.7	28.9
0°-40°	4853.9	46.8
0°-60°	8380.1	80.8
0°-90°	10368.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10368.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3944	3944	3944	3944	3944	
5°	3892	3900	3929	3938	3905	369
15°	3688	3712	3747	3770	3721	1040
25°	3339	3380	3436	3449	3397	1538
35°	2891	2936	3005	3026	2977	1808
45°	2362	2404	2481	2483	2434	1822
55°	1791	1827	1875	1848	1817	1601
65°	1191	1215	1236	1212	1192	1178
75°	591	604	618	595	582	628
85°	113	115	120	121	117	143
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3943.7	3943.7	3943.7	3943.7	3943.7
2.5°	3912.9	3925.6	3938.8	3944.5	3912.5
5°	3892.3	3899.7	3928.9	3937.9	3904.7
7.5°	3858.6	3869.7	3898.1	3902.2	3870.1
10°	3812.6	3832.3	3851.2	3871.8	3832.8
12.5°	3753.9	3780.6	3812.6	3816.3	3786.7
15°	3687.7	3712.4	3747.3	3769.9	3721.0
17.5°	3613.8	3637.6	3682.8	3686.9	3657.3
20°	3531.2	3560.7	3615.0	3624.4	3571.4
22.5°	3437.5	3477.3	3522.5	3531.6	3492.5
25°	3339.3	3380.4	3436.2	3449.0	3396.8
27.5°	3236.6	3276.0	3338.9	3347.9	3303.9
30°	3126.4	3163.4	3232.4	3247.7	3202.9
32.5°	3014.7	3051.7	3128.1	3140.8	3097.3
35°	2890.6	2935.8	3005.2	3026.2	2977.3
37.5°	2764.0	2808.0	2886.9	2905.8	2853.2
40°	2633.0	2676.5	2754.2	2769.8	2719.3
42.5°	2499.0	2542.6	2625.6	2628.0	2586.1
45°	2362.2	2404.1	2481.3	2483.4	2434.5
47.5°	2223.3	2265.6	2334.7	2326.9	2280.8
50°	2082.8	2123.1	2183.5	2167.8	2126.3
52.5°	1937.3	1976.4	2033.5	2008.0	1969.0
55°	1791.1	1827.2	1874.9	1847.8	1817.4
57.5°	1643.5	1680.1	1716.7	1689.2	1662.9
60°	1494.8	1526.9	1556.9	1528.9	1508.8
62.5°	1343.6	1371.1	1397.0	1370.3	1351.4
65°	1190.8	1215.0	1236.4	1211.7	1191.6
67.5°	1038.7	1059.3	1079.0	1053.5	1032.6
70°	886.7	904.4	922.4	896.1	876.8
72.5°	736.7	752.3	768.4	742.9	726.0
75°	590.9	604.4	617.6	595.0	581.8
77.5°	451.6	463.1	472.1	457.7	445.0
80°	322.1	330.8	336.1	330.4	318.4
82.5°	207.1	213.3	216.1	215.7	207.9
85°	112.6	114.6	120.0	121.2	117.1
87.5°	43.6	46.4	47.7	51.4	47.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)