

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: P488677

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-2HI-27-120-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: P488677
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-12-4-INS-A19156-LD4-2HI-27-120-EDD
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

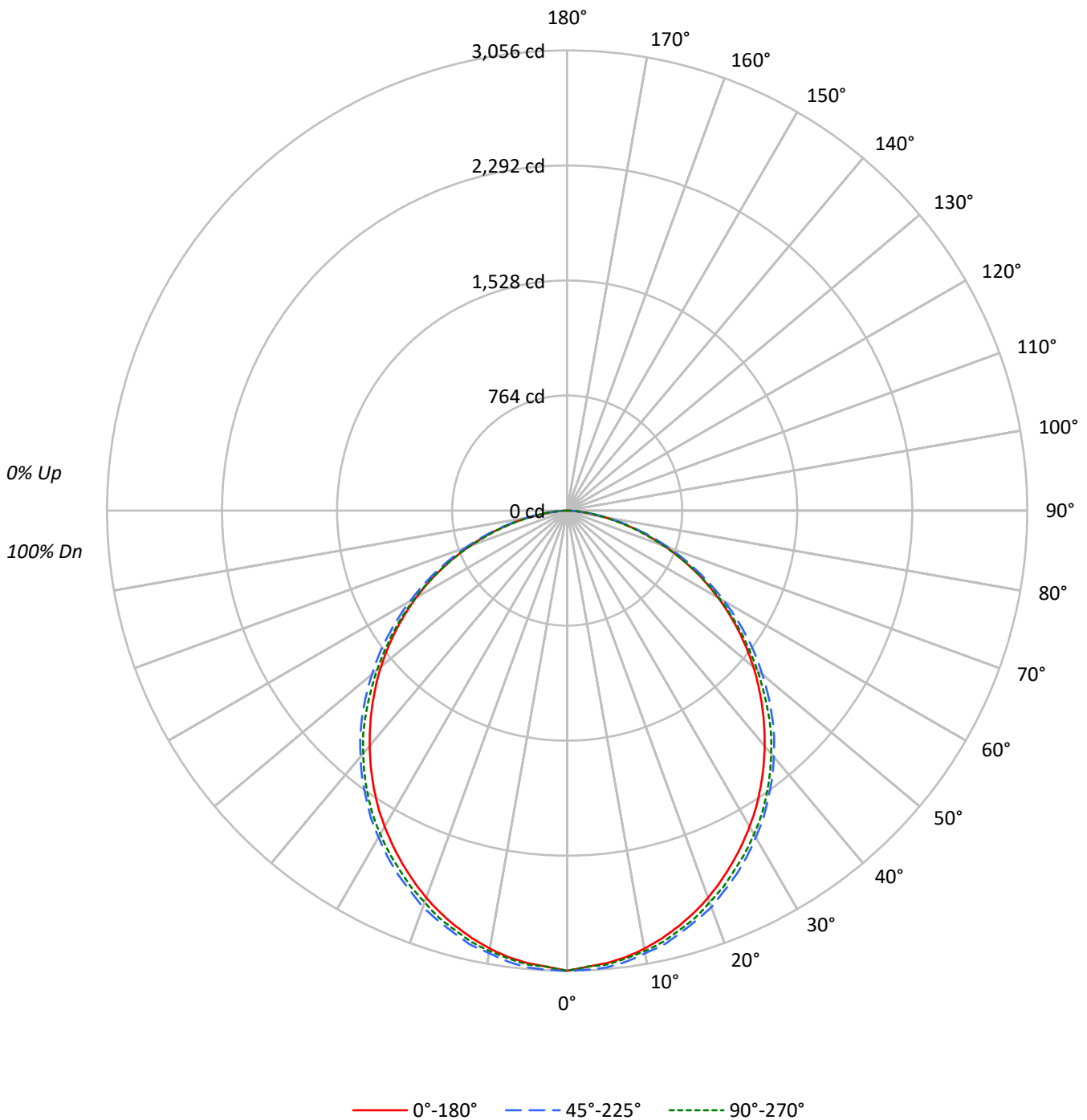
Lumens per Lamp: N/A
Luminaire Lumens: 8035.4 lumens
Efficiency: N/A
Efficacy: 93.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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°	8225	8225	8225
5°	8149	8225	8174
10°	8074	8156	8117
15°	7962	8091	8034
20°	7837	8023	7926
25°	7684	7907	7816
30°	7529	7784	7713
35°	7359	7651	7580
40°	7168	7498	7403
45°	6967	7319	7180
50°	6758	7084	6899
55°	6512	6817	6608
60°	6235	6494	6293
65°	5876	6101	5880
70°	5407	5625	5346
75°	4761	4976	4688
80°	3870	4037	3825
85°	2695	2871	2803



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	287.8	3.6
10°-20°	815.7	10.2
20°-30°	1216.6	15.1
30°-40°	1441.7	17.9
40°-50°	1458.8	18.2
50°-60°	1274.0	15.9
60°-70°	931.0	11.6
70°-80°	495.4	6.2
80°-90°	114.5	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
0°-30°	2320.1	28.9
0°-40°	3761.8	46.8
0°-60°	6494.6	80.8
0°-90°	8035.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8035.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3056	3056	3056	3056	3056	
5°	3017	3022	3045	3052	3026	286
15°	2858	2877	2904	2922	2884	806
25°	2588	2620	2663	2673	2632	1192
35°	2240	2275	2329	2345	2307	1401
45°	1831	1863	1923	1925	1887	1412
55°	1388	1416	1453	1432	1408	1241
65°	923	942	958	939	924	913
75°	458	468	479	461	451	487
85°	87	89	93	94	91	111
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3056.4	3056.4	3056.4	3056.4	3056.4
2.5°	3032.5	3042.4	3052.6	3057.0	3032.2
5°	3016.6	3022.3	3044.9	3051.9	3026.1
7.5°	2990.5	2999.1	3021.0	3024.2	2999.4
10°	2954.8	2970.1	2984.7	3000.7	2970.4
12.5°	2909.3	2930.0	2954.8	2957.7	2934.7
15°	2858.0	2877.1	2904.2	2921.7	2883.8
17.5°	2800.7	2819.1	2854.2	2857.4	2834.4
20°	2736.7	2759.6	2801.6	2809.0	2767.9
22.5°	2664.1	2695.0	2730.0	2737.0	2706.7
25°	2588.0	2619.8	2663.1	2673.0	2632.5
27.5°	2508.3	2538.9	2587.6	2594.6	2560.6
30°	2423.0	2451.7	2505.2	2516.9	2482.2
32.5°	2336.4	2365.0	2424.3	2434.1	2400.4
35°	2240.2	2275.2	2329.1	2345.3	2307.4
37.5°	2142.1	2176.2	2237.4	2252.0	2211.2
40°	2040.6	2074.3	2134.5	2146.6	2107.4
42.5°	1936.7	1970.5	2034.8	2036.7	2004.3
45°	1830.7	1863.2	1923.1	1924.6	1886.8
47.5°	1723.1	1755.9	1809.4	1803.3	1767.7
50°	1614.2	1645.4	1692.2	1680.1	1647.9
52.5°	1501.4	1531.7	1576.0	1556.2	1526.0
55°	1388.1	1416.1	1453.0	1432.0	1408.5
57.5°	1273.8	1302.1	1330.4	1309.1	1288.7
60°	1158.5	1183.3	1206.6	1184.9	1169.3
62.5°	1041.3	1062.6	1082.7	1062.0	1047.3
65°	922.8	941.6	958.2	939.1	923.5
67.5°	805.0	820.9	836.2	816.5	800.2
70°	687.2	700.9	714.9	694.5	679.5
72.5°	571.0	583.1	595.5	575.7	562.7
75°	457.9	468.4	478.6	461.1	450.9
77.5°	350.0	358.9	365.9	354.7	344.9
80°	249.7	256.3	260.5	256.0	246.8
82.5°	160.5	165.3	167.5	167.2	161.1
85°	87.3	88.8	93.0	93.9	90.8
87.5°	33.8	36.0	36.9	39.8	36.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)