

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: P488684

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-2HI-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: P488684
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-50-120-EDD-90
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

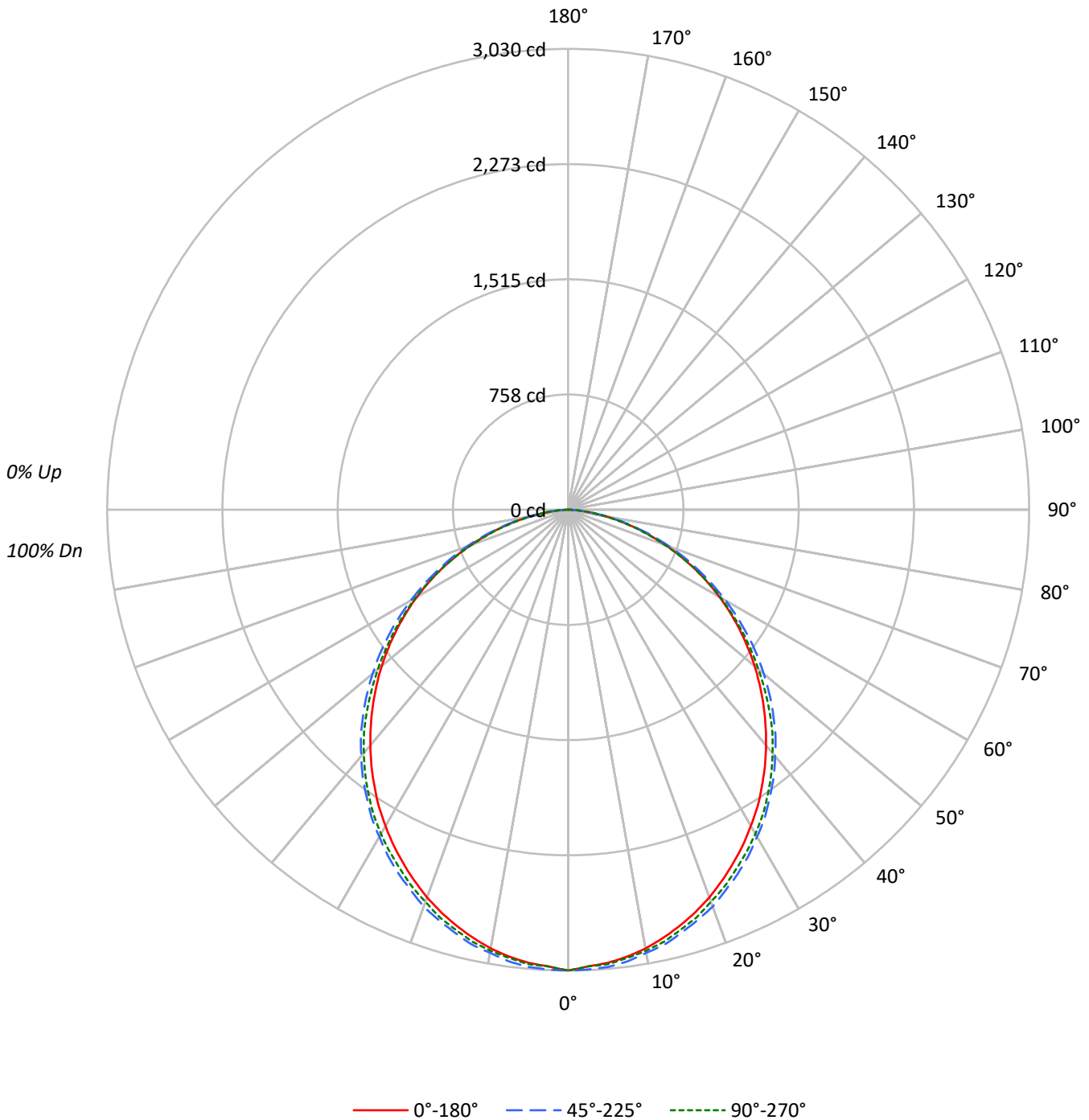
Lumens per Lamp: N/A
Luminaire Lumens: 7965.0 lumens
Efficiency: N/A
Efficacy: 92.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
Input Voltage (V): NR
Input Current (A_{in}): 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°	8153	8153	8153
5°	8077	8153	8103
10°	8003	8084	8046
15°	7892	8020	7964
20°	7768	7953	7857
25°	7617	7838	7748
30°	7463	7716	7645
35°	7295	7584	7514
40°	7105	7432	7338
45°	6906	7254	7117
50°	6698	7022	6839
55°	6455	6757	6550
60°	6180	6437	6238
65°	5825	6048	5829
70°	5360	5575	5300
75°	4719	4932	4648
80°	3835	4001	3790
85°	2671	2847	2779



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	285.3	3.6
10°-20°	808.6	10.2
20°-30°	1205.9	15.1
30°-40°	1429.0	17.9
40°-50°	1446.0	18.2
50°-60°	1262.8	15.9
60°-70°	922.8	11.6
70°-80°	491.0	6.2
80°-90°	113.5	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°	2299.8	28.9
0°-40°	3728.9	46.8
0°-60°	6437.7	80.8
0°-90°	7965.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7965.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3030	3030	3030	3030	3030	
5°	2990	2996	3018	3025	3000	284
15°	2833	2852	2879	2896	2858	799
25°	2565	2597	2640	2650	2610	1182
35°	2221	2255	2309	2325	2287	1389
45°	1815	1847	1906	1908	1870	1400
55°	1376	1404	1440	1420	1396	1230
65°	915	933	950	931	915	905
75°	454	464	474	457	447	483
85°	86	88	92	93	90	110
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3029.6	3029.6	3029.6	3029.6	3029.6
2.5°	3005.9	3015.7	3025.8	3030.2	3005.6
5°	2990.1	2995.8	3018.2	3025.2	2999.6
7.5°	2964.3	2972.8	2994.6	2997.7	2973.1
10°	2928.9	2944.1	2958.6	2974.4	2944.4
12.5°	2883.8	2904.3	2928.9	2931.8	2909.0
15°	2833.0	2851.9	2878.7	2896.1	2858.5
17.5°	2776.1	2794.4	2829.2	2832.3	2809.6
20°	2712.7	2735.4	2777.1	2784.3	2743.6
22.5°	2640.7	2671.3	2706.1	2713.0	2683.0
25°	2565.3	2596.8	2639.8	2649.6	2609.5
27.5°	2486.4	2516.7	2565.0	2571.9	2538.1
30°	2401.8	2430.2	2483.2	2494.9	2460.5
32.5°	2315.9	2344.3	2403.0	2412.8	2379.4
35°	2220.6	2255.3	2308.7	2324.8	2287.2
37.5°	2123.4	2157.1	2217.8	2232.3	2191.9
40°	2022.7	2056.1	2115.8	2127.8	2089.0
42.5°	1919.8	1953.2	2017.0	2018.9	1986.7
45°	1814.7	1846.9	1906.2	1907.8	1870.2
47.5°	1708.0	1740.5	1793.5	1787.5	1752.2
50°	1600.0	1631.0	1677.4	1665.4	1633.5
52.5°	1488.3	1518.3	1562.1	1542.6	1512.6
55°	1375.9	1403.7	1440.3	1419.5	1396.1
57.5°	1262.6	1290.7	1318.8	1297.6	1277.4
60°	1148.3	1173.0	1196.0	1174.5	1159.1
62.5°	1032.2	1053.3	1073.2	1052.7	1038.2
65°	914.8	933.4	949.8	930.8	915.4
67.5°	798.0	813.7	828.9	809.3	793.2
70°	681.2	694.7	708.6	688.4	673.6
72.5°	566.0	578.0	590.3	570.7	557.8
75°	453.9	464.3	474.4	457.1	447.0
77.5°	346.9	355.7	362.7	351.6	341.8
80°	247.5	254.1	258.2	253.8	244.6
82.5°	159.1	163.8	166.0	165.7	159.7
85°	86.5	88.1	92.2	93.1	90.0
87.5°	33.5	35.7	36.6	39.5	36.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)