

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: P488735

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-3STD-20-120-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: P488735
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-LD4-3STD-20-120-EDD
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

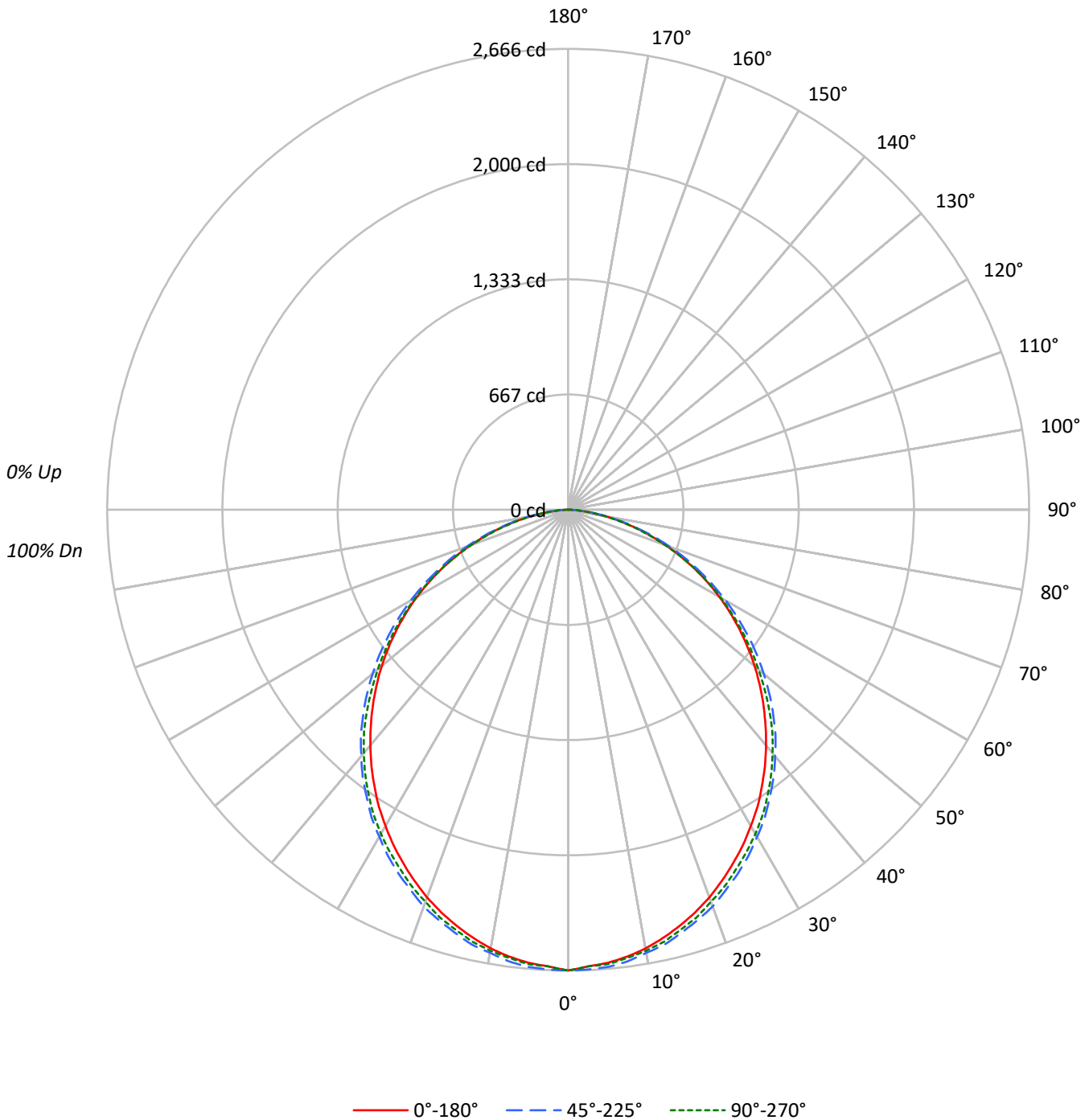
Lumens per Lamp: N/A
Luminaire Lumens: 7008.1 lumens
Efficiency: N/A
Efficacy: 70.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7173	7173	7173
5°	7107	7173	7129
10°	7042	7113	7079
15°	6944	7056	7007
20°	6835	6997	6913
25°	6702	6896	6817
30°	6566	6789	6727
35°	6418	6673	6611
40°	6252	6539	6457
45°	6076	6383	6262
50°	5894	6178	6017
55°	5680	5946	5763
60°	5438	5663	5489
65°	5125	5321	5128
70°	4715	4906	4663
75°	4153	4340	4089
80°	3374	3521	3335
85°	2350	2504	2445



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	251.0	3.6
10°-20°	711.4	10.2
20°-30°	1061.0	15.1
30°-40°	1257.4	17.9
40°-50°	1272.3	18.2
50°-60°	1111.1	15.9
60°-70°	812.0	11.6
70°-80°	432.0	6.2
80°-90°	99.8	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°	2023.5	28.9
0°-40°	3280.9	46.8
0°-60°	5664.3	80.8
0°-90°	7008.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7008.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2666	2666	2666	2666	2666	
5°	2631	2636	2656	2662	2639	249
15°	2493	2509	2533	2548	2515	703
25°	2257	2285	2323	2331	2296	1040
35°	1954	1984	2031	2046	2012	1222
45°	1597	1625	1677	1679	1646	1232
55°	1211	1235	1267	1249	1228	1082
65°	805	821	836	819	805	796
75°	399	408	417	402	393	425
85°	76	78	81	82	79	96
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2665.6	2665.6	2665.6	2665.6	2665.6
2.5°	2644.8	2653.4	2662.3	2666.2	2644.5
5°	2630.9	2635.9	2655.6	2661.7	2639.2
7.5°	2608.1	2615.6	2634.8	2637.6	2615.9
10°	2577.0	2590.4	2603.1	2617.0	2590.6
12.5°	2537.3	2555.4	2577.0	2579.5	2559.5
15°	2492.6	2509.3	2532.9	2548.2	2515.1
17.5°	2442.6	2458.7	2489.3	2492.1	2472.1
20°	2386.8	2406.8	2443.4	2449.8	2414.0
22.5°	2323.5	2350.4	2381.0	2387.1	2360.7
25°	2257.1	2284.9	2322.6	2331.2	2296.0
27.5°	2187.7	2214.3	2256.8	2262.9	2233.2
30°	2113.2	2138.2	2184.9	2195.2	2164.9
32.5°	2037.7	2062.7	2114.3	2123.0	2093.5
35°	1953.8	1984.4	2031.3	2045.5	2012.4
37.5°	1868.3	1898.0	1951.3	1964.1	1928.5
40°	1779.7	1809.1	1861.6	1872.2	1838.0
42.5°	1689.1	1718.6	1774.7	1776.3	1748.0
45°	1596.7	1625.0	1677.2	1678.6	1645.5
47.5°	1502.8	1531.4	1578.0	1572.8	1541.7
50°	1407.8	1435.0	1475.8	1465.3	1437.2
52.5°	1309.5	1335.9	1374.5	1357.3	1330.9
55°	1210.6	1235.1	1267.3	1248.9	1228.4
57.5°	1110.9	1135.6	1160.3	1141.7	1124.0
60°	1010.4	1032.0	1052.3	1033.4	1019.8
62.5°	908.2	926.8	944.3	926.2	913.4
65°	804.9	821.2	835.7	819.0	805.4
67.5°	702.1	716.0	729.3	712.1	697.9
70°	599.3	611.3	623.5	605.7	592.7
72.5°	498.0	508.5	519.4	502.1	490.7
75°	399.4	408.5	417.4	402.1	393.3
77.5°	305.2	313.0	319.1	309.4	300.8
80°	217.7	223.6	227.2	223.3	215.2
82.5°	140.0	144.1	146.1	145.8	140.5
85°	76.1	77.5	81.1	81.9	79.2
87.5°	29.4	31.4	32.2	34.7	31.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)