

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: P489611

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-2HI-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: P489611
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-LD4-2HI-20-120-EDD
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

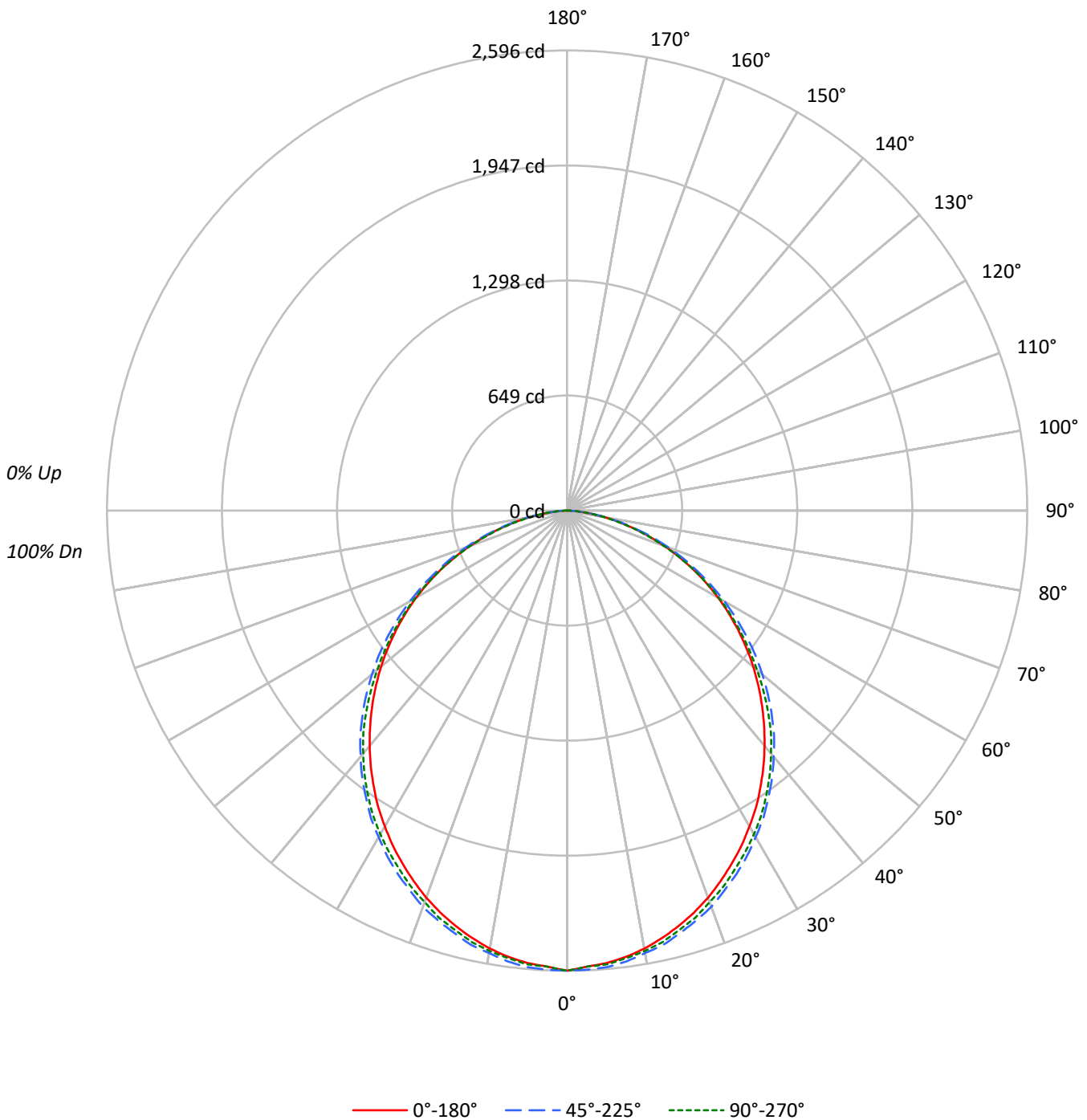
Lumens per Lamp: N/A
Luminaire Lumens: 6823.6 lumens
Efficiency: N/A
Efficacy: 79.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	3492	3492	3492
5°	3460	3492	3471
10°	3428	3463	3446
15°	3381	3435	3411
20°	3328	3406	3366
25°	3263	3357	3319
30°	3197	3305	3275
35°	3125	3249	3218
40°	3044	3184	3143
45°	2958	3107	3049
50°	2869	3008	2929
55°	2765	2894	2806
60°	2647	2757	2672
65°	2495	2591	2497
70°	2296	2388	2270
75°	2022	2113	1991
80°	1643	1714	1624
85°	1144	1220	1190



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	244.4	3.6
10°-20°	692.7	10.2
20°-30°	1033.1	15.1
30°-40°	1224.3	17.9
40°-50°	1238.8	18.2
50°-60°	1081.9	15.9
60°-70°	790.6	11.6
70°-80°	420.7	6.2
80°-90°	97.2	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°	1970.2	28.9
0°-40°	3194.5	46.8
0°-60°	5515.1	80.8
0°-90°	6823.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6823.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2596	2596	2596	2596	2596	
5°	2562	2566	2586	2592	2570	243
15°	2427	2443	2466	2481	2449	684
25°	2198	2225	2262	2270	2236	1012
35°	1902	1932	1978	1992	1959	1190
45°	1555	1582	1633	1634	1602	1199
55°	1179	1202	1234	1216	1196	1054
65°	784	800	814	798	784	776
75°	389	398	406	392	383	413
85°	74	75	79	80	77	94
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2595.5	2595.5	2595.5	2595.5	2595.5
2.5°	2575.2	2583.6	2592.2	2596.0	2574.9
5°	2561.7	2566.5	2585.7	2591.7	2569.8
7.5°	2539.5	2546.8	2565.4	2568.1	2547.1
10°	2509.2	2522.2	2534.6	2548.1	2522.4
12.5°	2470.5	2488.1	2509.2	2511.6	2492.2
15°	2427.0	2443.2	2466.2	2481.1	2448.9
17.5°	2378.3	2394.0	2423.7	2426.4	2407.0
20°	2324.0	2343.4	2379.1	2385.3	2350.5
22.5°	2262.3	2288.5	2318.3	2324.2	2298.5
25°	2197.7	2224.7	2261.5	2269.9	2235.5
27.5°	2130.1	2156.0	2197.4	2203.4	2174.4
30°	2057.6	2081.9	2127.4	2137.4	2107.9
32.5°	1984.0	2008.4	2058.7	2067.1	2038.4
35°	1902.4	1932.1	1977.8	1991.6	1959.4
37.5°	1819.1	1848.0	1899.9	1912.4	1877.8
40°	1732.8	1761.5	1812.6	1822.9	1789.6
42.5°	1644.7	1673.3	1728.0	1729.6	1702.0
45°	1554.6	1582.2	1633.0	1634.4	1602.2
47.5°	1463.2	1491.1	1536.5	1531.4	1501.1
50°	1370.7	1397.2	1437.0	1426.7	1399.4
52.5°	1275.0	1300.7	1338.3	1321.5	1295.8
55°	1178.7	1202.5	1233.9	1216.1	1196.1
57.5°	1081.7	1105.7	1129.8	1111.7	1094.4
60°	983.8	1004.9	1024.6	1006.2	993.0
62.5°	884.3	902.4	919.4	901.8	889.4
65°	783.7	799.6	813.7	797.5	784.2
67.5°	683.6	697.1	710.1	693.3	679.6
70°	583.6	595.2	607.1	589.8	577.1
72.5°	484.9	495.1	505.7	488.9	477.8
75°	388.9	397.8	406.4	391.6	382.9
77.5°	297.2	304.8	310.7	301.2	292.9
80°	212.0	217.7	221.2	217.4	209.6
82.5°	136.3	140.3	142.2	142.0	136.8
85°	74.1	75.4	79.0	79.8	77.1
87.5°	28.7	30.6	31.4	33.8	31.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)