

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: P489637

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-2STD-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: P489637  
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-LD4-2STD-27-120-EDD  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

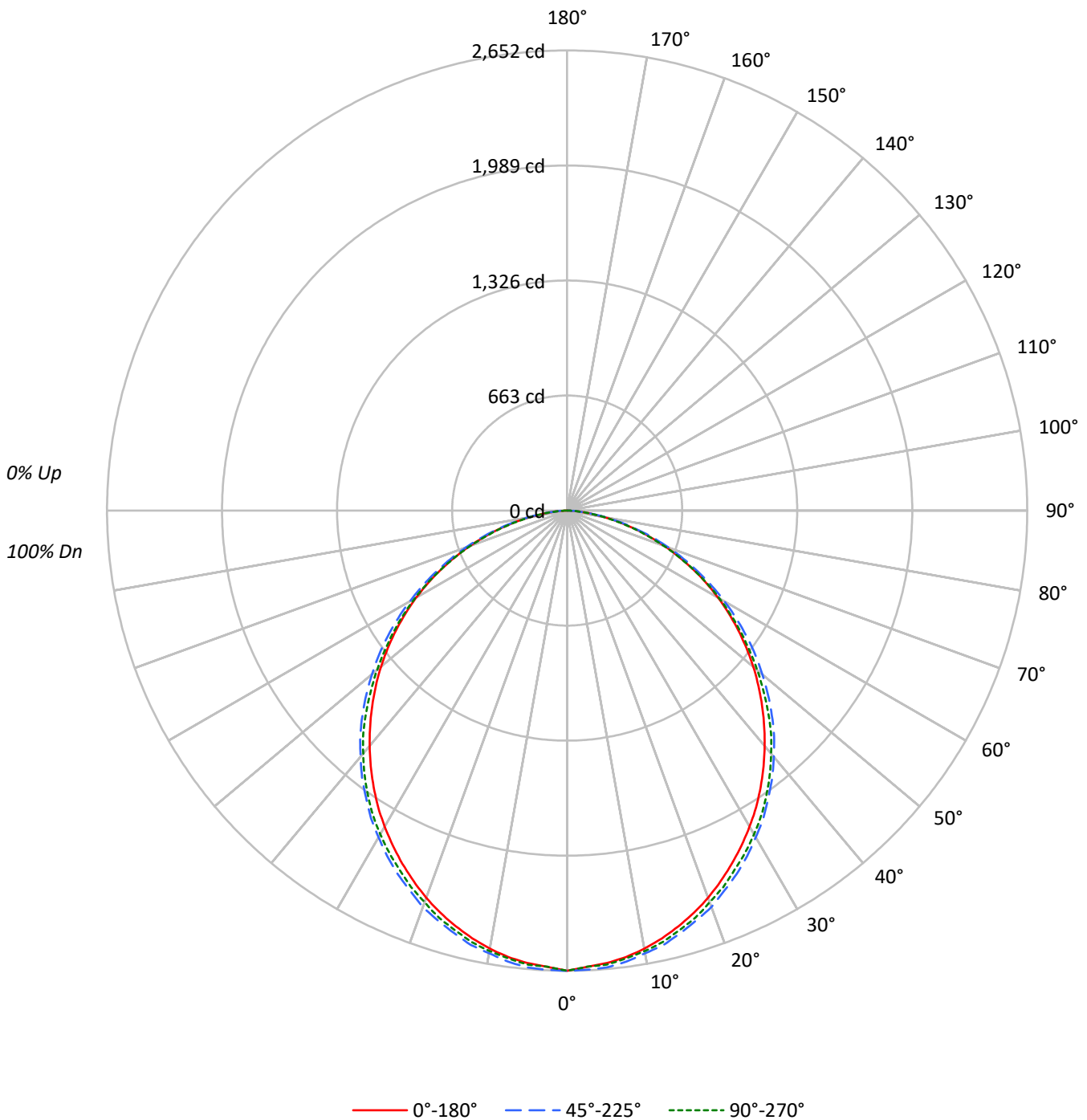
Lumens per Lamp: N/A  
Luminaire Lumens: 6973.2 lumens  
Efficiency: N/A  
Efficacy: 104.7 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 66.6  
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°	3569	3569	3569
5°	3536	3569	3547
10°	3503	3539	3522
15°	3455	3511	3486
20°	3400	3481	3439
25°	3334	3431	3392
30°	3267	3378	3347
35°	3193	3320	3289
40°	3110	3253	3212
45°	3023	3175	3115
50°	2932	3074	2993
55°	2826	2958	2867
60°	2705	2818	2731
65°	2550	2647	2551
70°	2346	2441	2320
75°	2066	2159	2034
80°	1679	1752	1660
85°	1169	1246	1216



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	249.8	3.6
10°-20°	707.9	10.2
20°-30°	1055.8	15.1
30°-40°	1251.1	17.9
40°-50°	1265.9	18.2
50°-60°	1105.6	15.9
60°-70°	807.9	11.6
70°-80°	429.9	6.2
80°-90°	99.4	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°	2013.4	28.9
0°-40°	3264.5	46.8
0°-60°	5636.0	80.8
0°-90°	6973.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6973.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2652	2652	2652	2652	2652	
5°	2618	2623	2642	2648	2626	248
15°	2480	2497	2520	2536	2503	699
25°	2246	2274	2311	2320	2284	1035
35°	1944	1974	2021	2035	2002	1216
45°	1589	1617	1669	1670	1637	1226
55°	1205	1229	1261	1243	1222	1077
65°	801	817	832	815	801	792
75°	397	406	415	400	391	423
85°	76	77	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°	2652.4	2652.4	2652.4	2652.4	2652.4
2.5°	2631.6	2640.2	2649.0	2652.9	2631.4
5°	2617.8	2622.8	2642.4	2648.5	2626.1
7.5°	2595.2	2602.6	2621.7	2624.4	2602.9
10°	2564.2	2577.5	2590.2	2604.0	2577.7
12.5°	2524.7	2542.6	2564.2	2566.7	2546.8
15°	2480.2	2496.8	2520.3	2535.5	2502.6
17.5°	2430.5	2446.5	2476.9	2479.6	2459.7
20°	2374.9	2394.8	2431.3	2437.6	2402.0
22.5°	2311.9	2338.7	2369.1	2375.2	2348.9
25°	2245.9	2273.5	2311.1	2319.6	2284.5
27.5°	2176.8	2203.3	2245.6	2251.7	2222.1
30°	2102.7	2127.6	2174.0	2184.2	2154.1
32.5°	2027.5	2052.4	2103.8	2112.4	2083.1
35°	1944.1	1974.5	2021.2	2035.3	2002.4
37.5°	1859.0	1888.5	1941.6	1954.3	1918.9
40°	1770.8	1800.1	1852.3	1862.8	1828.8
42.5°	1680.7	1710.0	1765.8	1767.5	1739.3
45°	1588.7	1616.9	1668.8	1670.2	1637.3
47.5°	1495.3	1523.8	1570.2	1564.9	1534.0
50°	1400.8	1427.9	1468.5	1458.0	1430.1
52.5°	1303.0	1329.2	1367.6	1350.5	1324.2
55°	1204.6	1228.9	1261.0	1242.7	1222.3
57.5°	1105.4	1130.0	1154.6	1136.1	1118.4
60°	1005.3	1026.9	1047.1	1028.3	1014.7
62.5°	903.6	922.2	939.6	921.6	908.9
65°	800.8	817.2	831.5	814.9	801.4
67.5°	698.6	712.4	725.7	708.5	694.5
70°	596.4	608.2	620.4	602.7	589.7
72.5°	495.5	506.0	516.8	499.6	488.3
75°	397.4	406.5	415.3	400.1	391.3
77.5°	303.7	311.4	317.5	307.8	299.3
80°	216.7	222.5	226.1	222.2	214.2
82.5°	139.3	143.4	145.4	145.1	139.8
85°	75.7	77.1	80.7	81.5	78.8
87.5°	29.3	31.2	32.1	34.5	31.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)