

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: P489633

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-2LO-50-120-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: P489633  
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-LD4-2LO-50-120-EDD  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

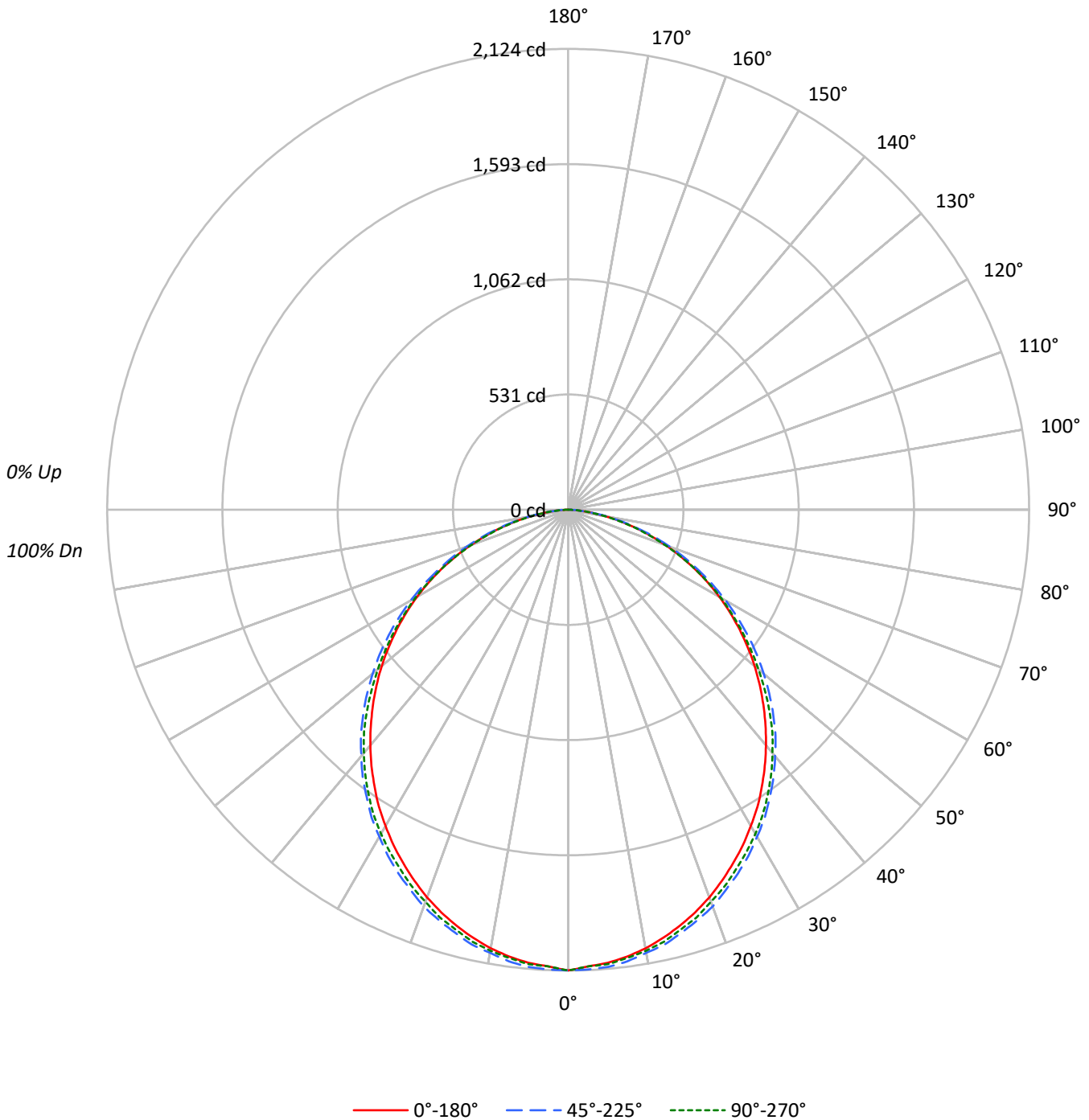
Lumens per Lamp: N/A  
Luminaire Lumens: 5582.9 lumens  
Efficiency: N/A  
Efficacy: 119.3 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 46.8  
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°	2857	2857	2857
5°	2831	2857	2840
10°	2805	2833	2820
15°	2766	2811	2791
20°	2723	2787	2754
25°	2669	2747	2715
30°	2616	2704	2679
35°	2557	2658	2633
40°	2490	2605	2572
45°	2420	2542	2494
50°	2348	2461	2397
55°	2262	2368	2296
60°	2166	2256	2186
65°	2041	2119	2043
70°	1878	1954	1857
75°	1654	1729	1629
80°	1344	1402	1329
85°	936	997	974



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	200.0	3.6
10°-20°	566.7	10.2
20°-30°	845.3	15.1
30°-40°	1001.7	17.9
40°-50°	1013.5	18.2
50°-60°	885.2	15.9
60°-70°	646.8	11.6
70°-80°	344.2	6.2
80°-90°	79.6	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°	1612.0	28.9
0°-40°	2613.7	46.8
0°-60°	4512.4	80.8
0°-90°	5582.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5582.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2124	2124	2124	2124	2124	
5°	2096	2100	2116	2120	2102	199
15°	1986	1999	2018	2030	2004	560
25°	1798	1820	1850	1857	1829	828
35°	1556	1581	1618	1630	1603	973
45°	1272	1294	1336	1337	1311	981
55°	964	984	1010	995	979	862
65°	641	654	666	652	642	634
75°	318	326	332	320	313	338
85°	61	62	65	65	63	77
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2123.5	2123.5	2123.5	2123.5	2123.5
2.5°	2106.9	2113.8	2120.9	2124.0	2106.7
5°	2095.9	2099.9	2115.6	2120.4	2102.5
7.5°	2077.7	2083.7	2099.0	2101.2	2083.9
10°	2053.0	2063.6	2073.8	2084.8	2063.8
12.5°	2021.3	2035.7	2053.0	2054.9	2039.0
15°	1985.7	1999.0	2017.8	2029.9	2003.6
17.5°	1945.9	1958.7	1983.0	1985.3	1969.3
20°	1901.4	1917.3	1946.5	1951.6	1923.1
22.5°	1851.0	1872.4	1896.8	1901.6	1880.6
25°	1798.1	1820.2	1850.3	1857.2	1829.1
27.5°	1742.8	1764.0	1797.9	1802.7	1779.1
30°	1683.5	1703.4	1740.6	1748.7	1724.6
32.5°	1623.3	1643.2	1684.4	1691.2	1667.8
35°	1556.5	1580.8	1618.2	1629.5	1603.2
37.5°	1488.3	1512.0	1554.5	1564.7	1536.3
40°	1417.8	1441.2	1483.0	1491.4	1464.2
42.5°	1345.6	1369.1	1413.8	1415.1	1392.5
45°	1272.0	1294.5	1336.1	1337.2	1310.9
47.5°	1197.2	1220.0	1257.1	1252.9	1228.1
50°	1121.5	1143.2	1175.7	1167.3	1145.0
52.5°	1043.2	1064.2	1095.0	1081.2	1060.2
55°	964.4	983.9	1009.6	995.0	978.6
57.5°	885.0	904.7	924.4	909.5	895.4
60°	804.9	822.2	838.3	823.3	812.4
62.5°	723.5	738.3	752.2	737.9	727.7
65°	641.2	654.2	665.7	652.5	641.6
67.5°	559.3	570.4	581.0	567.3	556.0
70°	477.5	487.0	496.7	482.5	472.1
72.5°	396.7	405.1	413.7	400.0	390.9
75°	318.2	325.5	332.5	320.4	313.3
77.5°	243.2	249.3	254.2	246.5	239.6
80°	173.5	178.1	181.0	177.9	171.5
82.5°	111.5	114.8	116.4	116.2	112.0
85°	60.6	61.7	64.6	65.3	63.1
87.5°	23.5	25.0	25.7	27.7	25.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)