

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: P489165

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-4LO-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: P489165  
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-24-2-INS-A19156-LD4-4LO-50-120-EDD  
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

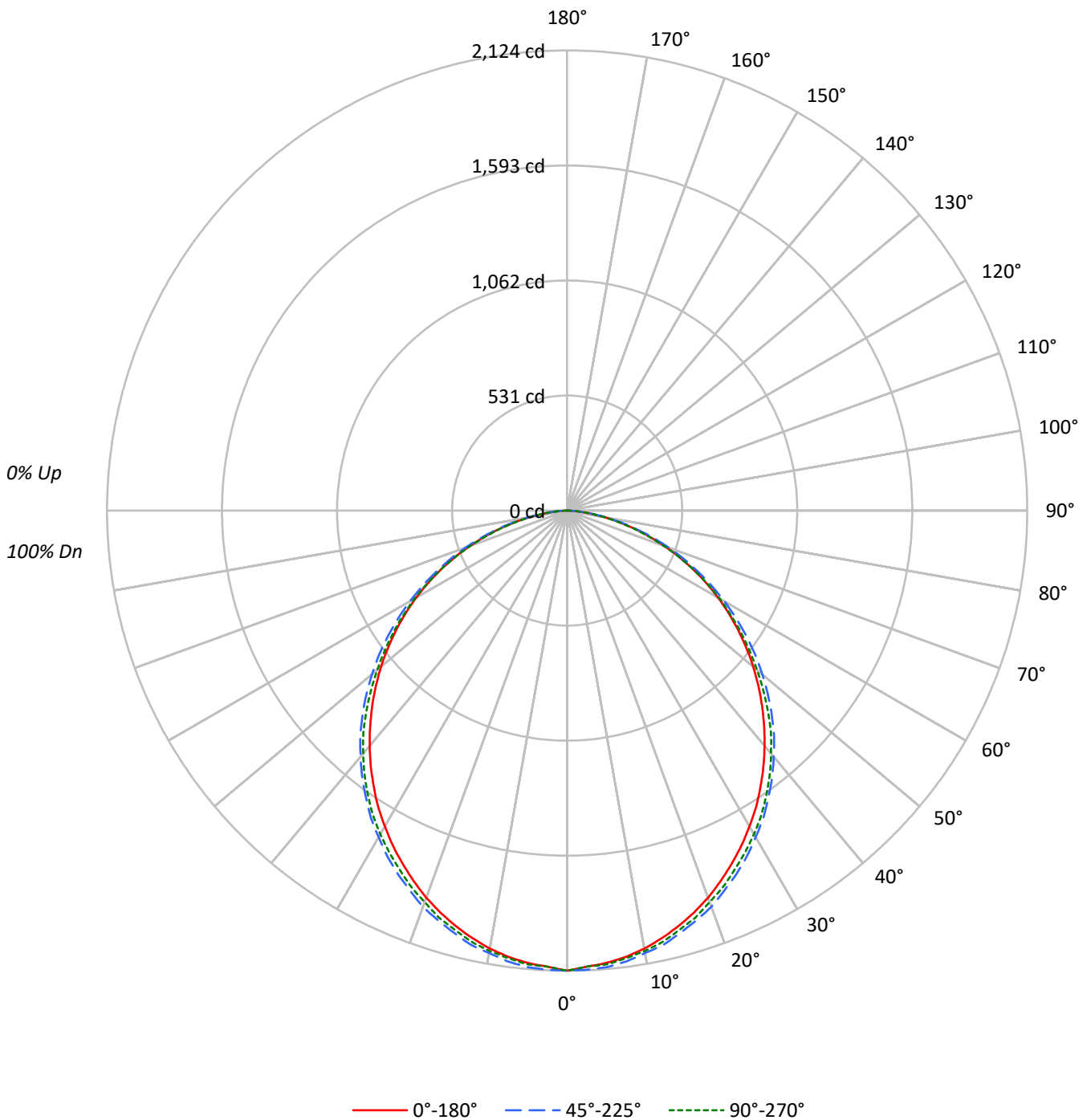
Lumens per Lamp: N/A  
Luminaire Lumens: 5582.7 lumens  
Efficiency: N/A  
Efficacy: 119.3 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

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	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°	5714	5714	5714
5°	5661	5715	5679
10°	5610	5666	5639
15°	5532	5621	5582
20°	5445	5574	5507
25°	5339	5494	5431
30°	5231	5408	5359
35°	5113	5316	5266
40°	4980	5210	5143
45°	4840	5085	4988
50°	4695	4922	4793
55°	4525	4736	4591
60°	4332	4512	4372
65°	4083	4239	4085
70°	3756	3908	3714
75°	3307	3457	3257
80°	2689	2805	2658
85°	1871	1995	1948



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	200.0	3.6
10°-20°	566.7	10.2
20°-30°	845.2	15.1
30°-40°	1001.6	17.9
40°-50°	1013.5	18.2
50°-60°	885.1	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°	2613.6	46.8
0°-60°	4512.2	80.8
0°-90°	5582.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5582.7	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	1629	1603	973
45°	1272	1294	1336	1337	1311	981
55°	964	984	1010	995	978	862
65°	641	654	666	652	642	634
75°	318	325	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	2113.7	2120.8	2123.9	2106.6
5°	2095.8	2099.8	2115.5	2120.4	2102.4
7.5°	2077.7	2083.6	2098.9	2101.1	2083.9
10°	2052.9	2063.5	2073.7	2084.7	2063.7
12.5°	2021.2	2035.6	2052.9	2054.9	2038.9
15°	1985.6	1998.9	2017.7	2029.9	2003.5
17.5°	1945.8	1958.6	1983.0	1985.2	1969.3
20°	1901.3	1917.3	1946.5	1951.6	1923.0
22.5°	1850.9	1872.4	1896.7	1901.6	1880.5
25°	1798.0	1820.1	1850.2	1857.1	1829.0
27.5°	1742.7	1763.9	1797.8	1802.7	1779.0
30°	1683.4	1703.3	1740.5	1748.7	1724.6
32.5°	1623.2	1643.1	1684.3	1691.2	1667.7
35°	1556.4	1580.8	1618.1	1629.4	1603.1
37.5°	1488.3	1512.0	1554.4	1564.6	1536.3
40°	1417.7	1441.2	1483.0	1491.4	1464.2
42.5°	1345.6	1369.0	1413.7	1415.1	1392.5
45°	1271.9	1294.5	1336.1	1337.2	1310.8
47.5°	1197.1	1219.9	1257.1	1252.9	1228.1
50°	1121.5	1143.1	1175.7	1167.3	1144.9
52.5°	1043.1	1064.2	1094.9	1081.2	1060.2
55°	964.4	983.9	1009.5	994.9	978.5
57.5°	885.0	904.6	924.3	909.5	895.4
60°	804.9	822.1	838.3	823.2	812.4
62.5°	723.5	738.3	752.2	737.8	727.7
65°	641.2	654.2	665.7	652.4	641.6
67.5°	559.3	570.4	581.0	567.3	556.0
70°	477.4	486.9	496.7	482.5	472.1
72.5°	396.7	405.1	413.7	400.0	390.9
75°	318.1	325.4	332.5	320.4	313.3
77.5°	243.1	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	111.9
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)