

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: P488702

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-2STD-30-120-EDD-90**

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: P488702  
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-LD4-2STD-30-120-EDD-90  
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

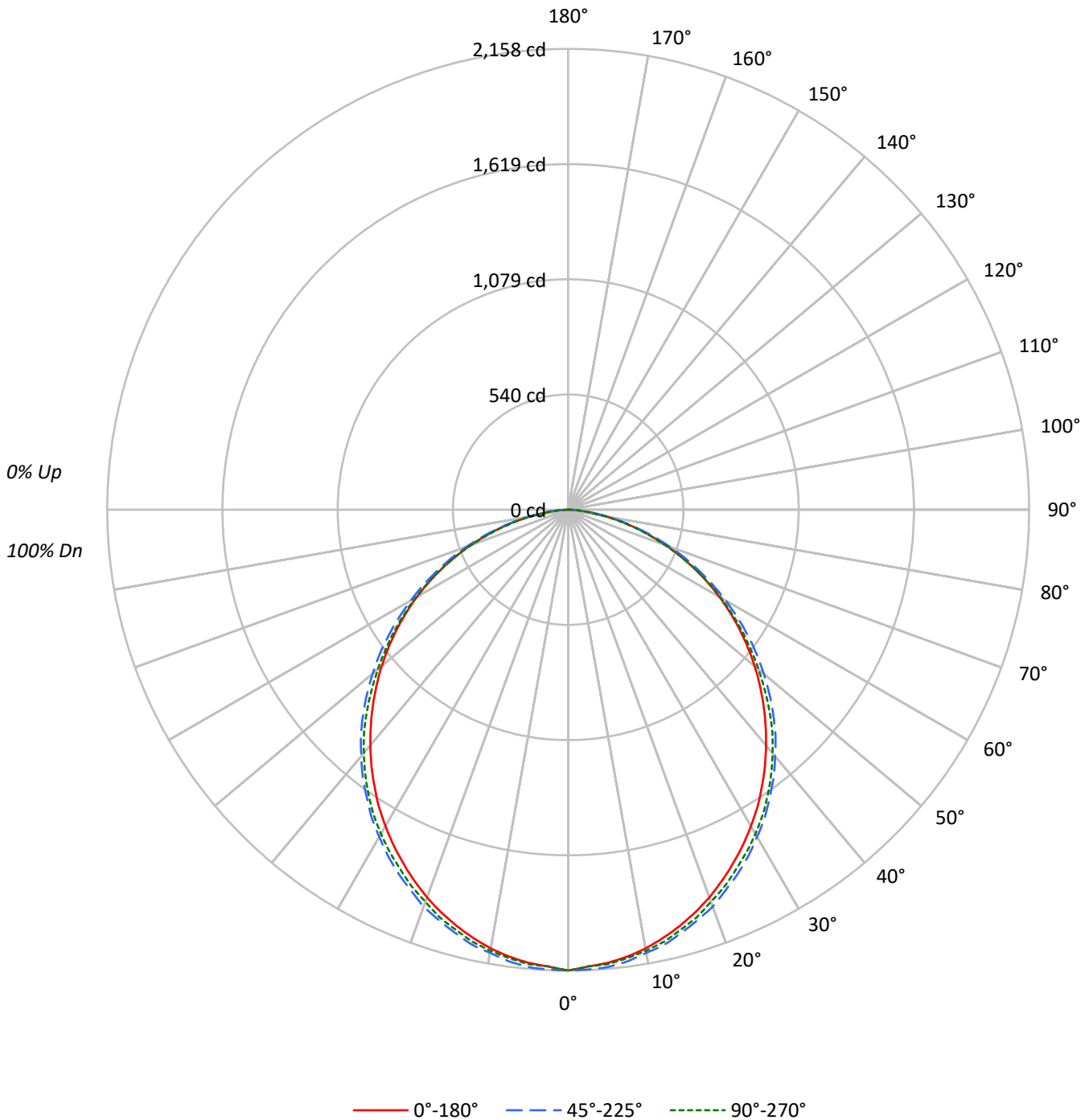
Lumens per Lamp: N/A  
Luminaire Lumens: 5673.3 lumens  
Efficiency: N/A  
Efficacy: 85.2 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	5807	5807	5807
5°	5753	5807	5772
10°	5701	5758	5731
15°	5622	5713	5672
20°	5533	5665	5596
25°	5425	5583	5519
30°	5316	5496	5446
35°	5196	5402	5352
40°	5061	5294	5227
45°	4919	5167	5069
50°	4771	5002	4871
55°	4598	4813	4665
60°	4402	4585	4443
65°	4149	4308	4152
70°	3818	3971	3775
75°	3361	3513	3310
80°	2732	2850	2700
85°	1902	2029	1979



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	203.2	3.6
10°-20°	575.9	10.2
20°-30°	859.0	15.1
30°-40°	1017.9	17.9
40°-50°	1029.9	18.2
50°-60°	899.5	15.9
60°-70°	657.3	11.6
70°-80°	349.8	6.2
80°-90°	80.8	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°	1638.1	28.9
0°-40°	2656.0	46.8
0°-60°	4585.4	80.8
0°-90°	5673.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5673.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2158	2158	2158	2158	2158	
5°	2130	2134	2150	2155	2137	202
15°	2018	2031	2050	2063	2036	569
25°	1827	1850	1880	1887	1859	842
35°	1582	1606	1644	1656	1629	989
45°	1292	1316	1358	1359	1332	997
55°	980	1000	1026	1011	994	876
65°	652	665	676	663	652	645
75°	323	331	338	326	318	344
85°	62	63	66	66	64	78
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2157.9	2157.9	2157.9	2157.9	2157.9
2.5°	2141.1	2148.0	2155.2	2158.4	2140.8
5°	2129.8	2133.9	2149.8	2154.8	2136.6
7.5°	2111.4	2117.5	2133.0	2135.2	2117.7
10°	2086.2	2097.0	2107.3	2118.6	2097.2
12.5°	2054.0	2068.7	2086.2	2088.2	2072.0
15°	2017.9	2031.3	2050.5	2062.8	2036.1
17.5°	1977.4	1990.4	2015.2	2017.4	2001.2
20°	1932.2	1948.4	1978.1	1983.2	1954.2
22.5°	1880.9	1902.7	1927.5	1932.4	1911.1
25°	1827.2	1849.7	1880.3	1887.2	1858.7
27.5°	1771.0	1792.6	1827.0	1831.9	1807.9
30°	1710.7	1731.0	1768.7	1777.1	1752.6
32.5°	1649.6	1669.8	1711.6	1718.6	1694.8
35°	1581.7	1606.4	1644.4	1655.9	1629.1
37.5°	1512.4	1536.5	1579.7	1590.0	1561.2
40°	1440.7	1464.5	1507.0	1515.6	1487.9
42.5°	1367.4	1391.3	1436.7	1438.0	1415.1
45°	1292.5	1315.5	1357.8	1358.9	1332.1
47.5°	1216.6	1239.7	1277.5	1273.2	1248.0
50°	1139.7	1161.7	1194.7	1186.2	1163.5
52.5°	1060.1	1081.4	1112.7	1098.7	1077.4
55°	980.0	999.8	1025.9	1011.1	994.4
57.5°	899.3	919.3	939.3	924.3	909.9
60°	817.9	835.5	851.9	836.6	825.6
62.5°	735.2	750.3	764.4	749.8	739.5
65°	651.6	664.8	676.5	663.0	652.0
67.5°	568.4	579.6	590.4	576.5	565.0
70°	485.2	494.9	504.7	490.4	479.8
72.5°	403.1	411.7	420.4	406.5	397.3
75°	323.3	330.7	337.9	325.6	318.4
77.5°	247.1	253.4	258.3	250.5	243.5
80°	176.3	181.0	183.9	180.8	174.2
82.5°	113.3	116.7	118.3	118.0	113.8
85°	61.6	62.7	65.7	66.3	64.1
87.5°	23.8	25.4	26.1	28.1	25.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)