

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: P488701

Luminaire Tested: **CLM-12-4-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: P488701  
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-27-120-EDD  
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

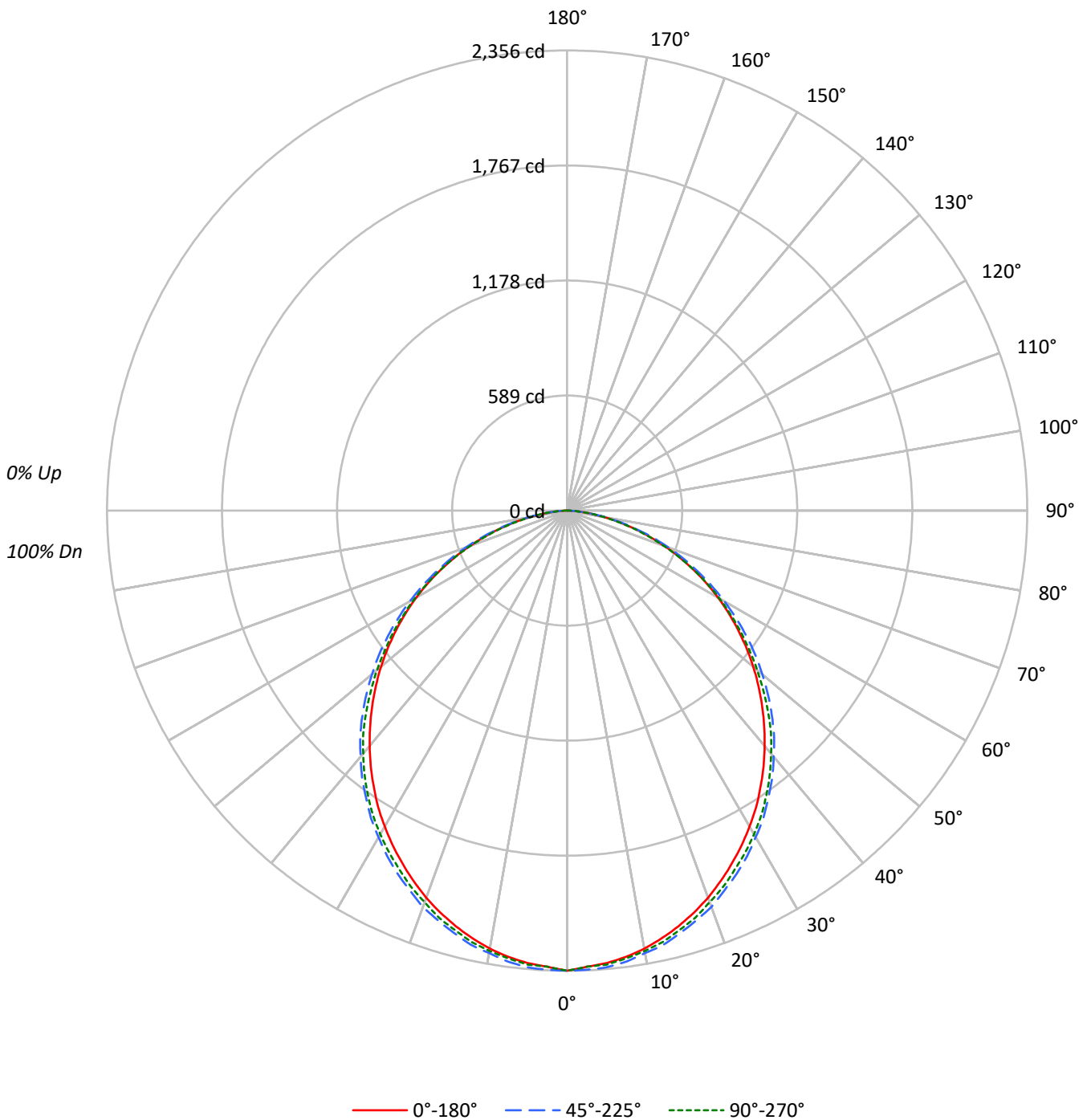
Lumens per Lamp: N/A  
Luminaire Lumens: 6194.0 lumens  
Efficiency: N/A  
Efficacy: 93.0 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	6340	6340	6340
5°	6281	6340	6301
10°	6224	6287	6257
15°	6138	6237	6193
20°	6041	6184	6110
25°	5923	6095	6025
30°	5803	6000	5945
35°	5673	5898	5843
40°	5525	5780	5707
45°	5370	5641	5535
50°	5209	5461	5318
55°	5020	5255	5094
60°	4806	5006	4851
65°	4530	4703	4532
70°	4168	4336	4121
75°	3670	3836	3614
80°	2982	3112	2947
85°	2078	2214	2161



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	221.9	3.6
10°-20°	628.8	10.2
20°-30°	937.8	15.1
30°-40°	1111.3	17.9
40°-50°	1124.5	18.2
50°-60°	982.1	15.9
60°-70°	717.6	11.6
70°-80°	381.8	6.2
80°-90°	88.3	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°	1788.5	28.9
0°-40°	2899.8	46.8
0°-60°	5006.3	80.8
0°-90°	6194.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6194.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2356	2356	2356	2356	2356	
5°	2325	2330	2347	2352	2333	220
15°	2203	2218	2239	2252	2223	621
25°	1995	2019	2053	2060	2029	919
35°	1727	1754	1795	1808	1779	1080
45°	1411	1436	1482	1484	1454	1089
55°	1070	1092	1120	1104	1086	956
65°	711	726	739	724	712	704
75°	353	361	369	355	348	375
85°	67	68	72	72	70	85
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2356.0	2356.0	2356.0	2356.0	2356.0
2.5°	2337.6	2345.2	2353.0	2356.5	2337.3
5°	2325.3	2329.7	2347.1	2352.5	2332.7
7.5°	2305.2	2311.8	2328.7	2331.2	2312.0
10°	2277.7	2289.5	2300.7	2313.0	2289.7
12.5°	2242.6	2258.5	2277.7	2279.9	2262.2
15°	2203.1	2217.8	2238.6	2252.1	2222.9
17.5°	2158.9	2173.1	2200.1	2202.6	2184.9
20°	2109.5	2127.2	2159.6	2165.3	2133.6
22.5°	2053.6	2077.4	2104.4	2109.8	2086.5
25°	1994.9	2019.4	2052.8	2060.4	2029.3
27.5°	1933.5	1957.1	1994.7	2000.1	1973.8
30°	1867.7	1889.8	1931.1	1940.2	1913.4
32.5°	1801.0	1823.1	1868.7	1876.3	1850.3
35°	1726.8	1753.9	1795.3	1807.9	1778.6
37.5°	1651.2	1677.5	1724.6	1735.9	1704.5
40°	1572.9	1599.0	1645.4	1654.7	1624.5
42.5°	1492.9	1518.9	1568.5	1570.0	1545.0
45°	1411.2	1436.2	1482.4	1483.6	1454.4
47.5°	1328.2	1353.5	1394.7	1390.1	1362.6
50°	1244.3	1268.3	1304.4	1295.1	1270.3
52.5°	1157.4	1180.7	1214.8	1199.6	1176.3
55°	1070.0	1091.6	1120.1	1103.9	1085.7
57.5°	981.9	1003.7	1025.6	1009.1	993.4
60°	893.0	912.1	930.1	913.4	901.3
62.5°	802.7	819.1	834.6	818.6	807.3
65°	711.4	725.8	738.6	723.9	711.8
67.5°	620.5	632.8	644.6	629.4	616.9
70°	529.7	540.3	551.1	535.4	523.8
72.5°	440.1	449.4	459.0	443.8	433.7
75°	353.0	361.1	368.9	355.4	347.6
77.5°	269.8	276.6	282.0	273.4	265.8
80°	192.4	197.6	200.8	197.4	190.2
82.5°	123.7	127.4	129.1	128.9	124.2
85°	67.3	68.5	71.7	72.4	70.0
87.5°	26.0	27.7	28.5	30.7	28.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)