

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: P489193

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-5LO-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: P489193  
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-LD4-5LO-27-120-EDD  
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

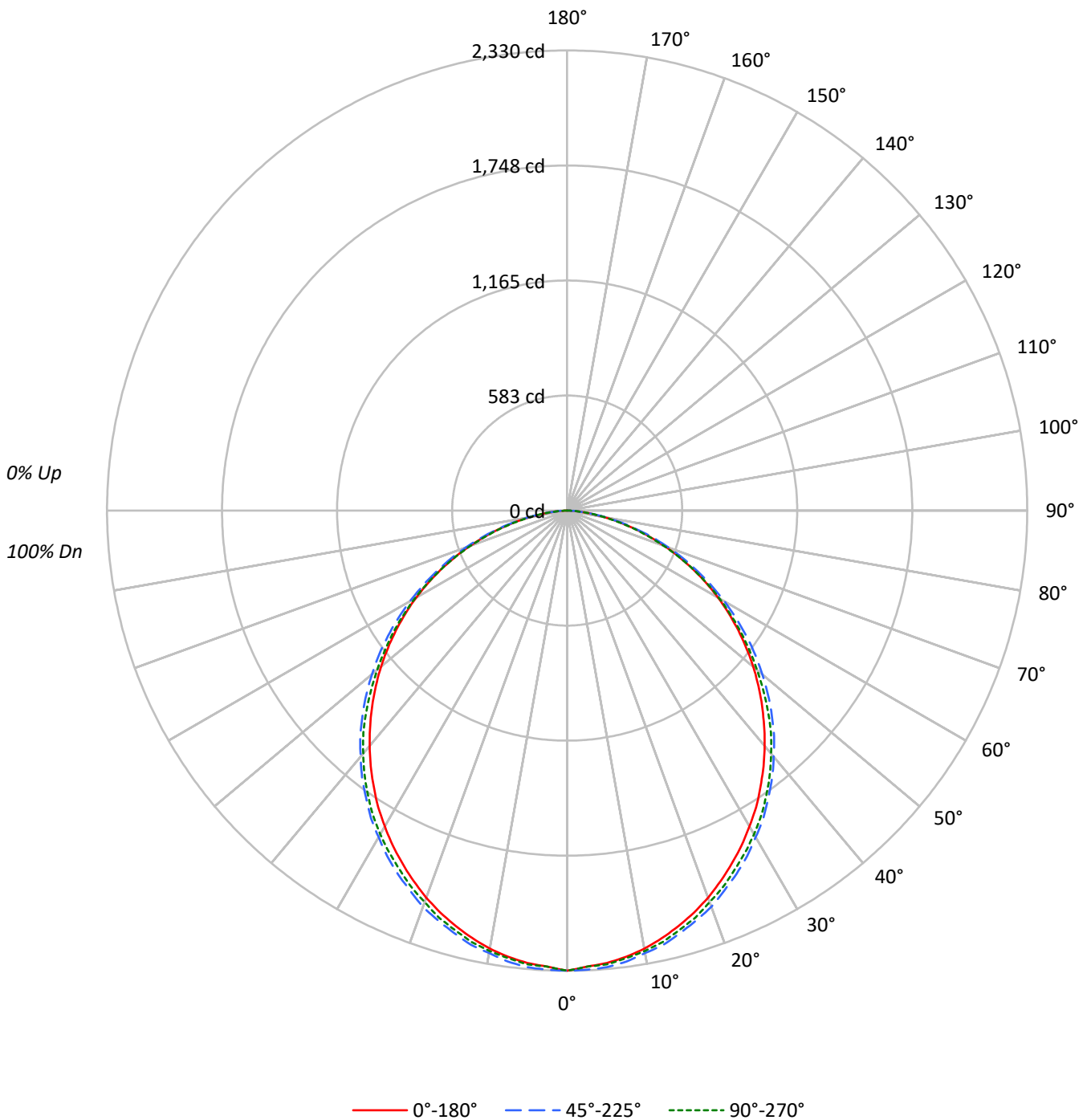
Lumens per Lamp: N/A  
Luminaire Lumens: 6124.9 lumens  
Efficiency: N/A  
Efficacy: 104.7 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 58.5  
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°	6269	6269	6269
5°	6211	6270	6231
10°	6154	6217	6187
15°	6069	6167	6124
20°	5974	6115	6042
25°	5857	6027	5958
30°	5739	5933	5879
35°	5610	5832	5778
40°	5464	5715	5643
45°	5310	5578	5473
50°	5151	5400	5259
55°	4964	5196	5037
60°	4752	4950	4797
65°	4479	4651	4482
70°	4121	4287	4076
75°	3629	3793	3573
80°	2949	3078	2915
85°	2053	2189	2137



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	219.4	3.6
10°-20°	621.8	10.2
20°-30°	927.3	15.1
30°-40°	1098.9	17.9
40°-50°	1111.9	18.2
50°-60°	971.1	15.9
60°-70°	709.6	11.6
70°-80°	377.6	6.2
80°-90°	87.3	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°	1768.5	28.9
0°-40°	2867.4	46.8
0°-60°	4950.4	80.8
0°-90°	6124.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6124.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2330	2330	2330	2330	2330	
5°	2299	2304	2321	2326	2307	218
15°	2178	2193	2214	2227	2198	614
25°	1973	1997	2030	2038	2007	909
35°	1708	1734	1775	1788	1759	1068
45°	1395	1420	1466	1467	1438	1077
55°	1058	1079	1108	1092	1074	946
65°	703	718	730	716	704	696
75°	349	357	365	352	344	371
85°	66	68	71	72	69	84
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2329.7	2329.7	2329.7	2329.7	2329.7
2.5°	2311.5	2319.0	2326.8	2330.2	2311.2
5°	2299.4	2303.7	2321.0	2326.3	2306.6
7.5°	2279.4	2286.0	2302.8	2305.2	2286.2
10°	2252.3	2263.9	2275.1	2287.2	2264.2
12.5°	2217.6	2233.3	2252.3	2254.4	2237.0
15°	2178.5	2193.0	2213.7	2227.0	2198.1
17.5°	2134.8	2148.9	2175.6	2178.0	2160.5
20°	2086.0	2103.5	2135.5	2141.1	2109.8
22.5°	2030.7	2054.2	2080.9	2086.2	2063.2
25°	1972.6	1996.9	2029.9	2037.5	2006.6
27.5°	1912.0	1935.3	1972.4	1977.7	1951.8
30°	1846.9	1868.8	1909.5	1918.5	1892.1
32.5°	1780.9	1802.7	1847.9	1855.4	1829.7
35°	1707.6	1734.3	1775.3	1787.7	1758.8
37.5°	1632.8	1658.8	1705.4	1716.6	1685.5
40°	1555.4	1581.1	1627.0	1636.2	1606.4
42.5°	1476.3	1502.0	1551.0	1552.5	1527.7
45°	1395.4	1420.2	1465.8	1467.0	1438.2
47.5°	1313.4	1338.4	1379.2	1374.6	1347.4
50°	1230.4	1254.2	1289.9	1280.6	1256.1
52.5°	1144.5	1167.5	1201.3	1186.2	1163.1
55°	1058.0	1079.4	1107.6	1091.5	1073.6
57.5°	970.9	992.5	1014.1	997.9	982.3
60°	883.0	902.0	919.7	903.2	891.3
62.5°	793.7	810.0	825.3	809.5	798.3
65°	703.4	717.7	730.4	715.8	703.9
67.5°	613.6	625.8	637.4	622.4	610.0
70°	523.8	534.2	544.9	529.4	518.0
72.5°	435.2	444.4	453.9	438.9	428.9
75°	349.0	357.1	364.8	351.5	343.7
77.5°	266.8	273.6	278.9	270.4	262.9
80°	190.3	195.4	198.6	195.2	188.1
82.5°	122.3	126.0	127.7	127.4	122.8
85°	66.5	67.7	70.9	71.6	69.2
87.5°	25.7	27.4	28.2	30.3	27.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)