

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: P489627

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-2LO-30-120-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: P489627  
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-30-120-EDD  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

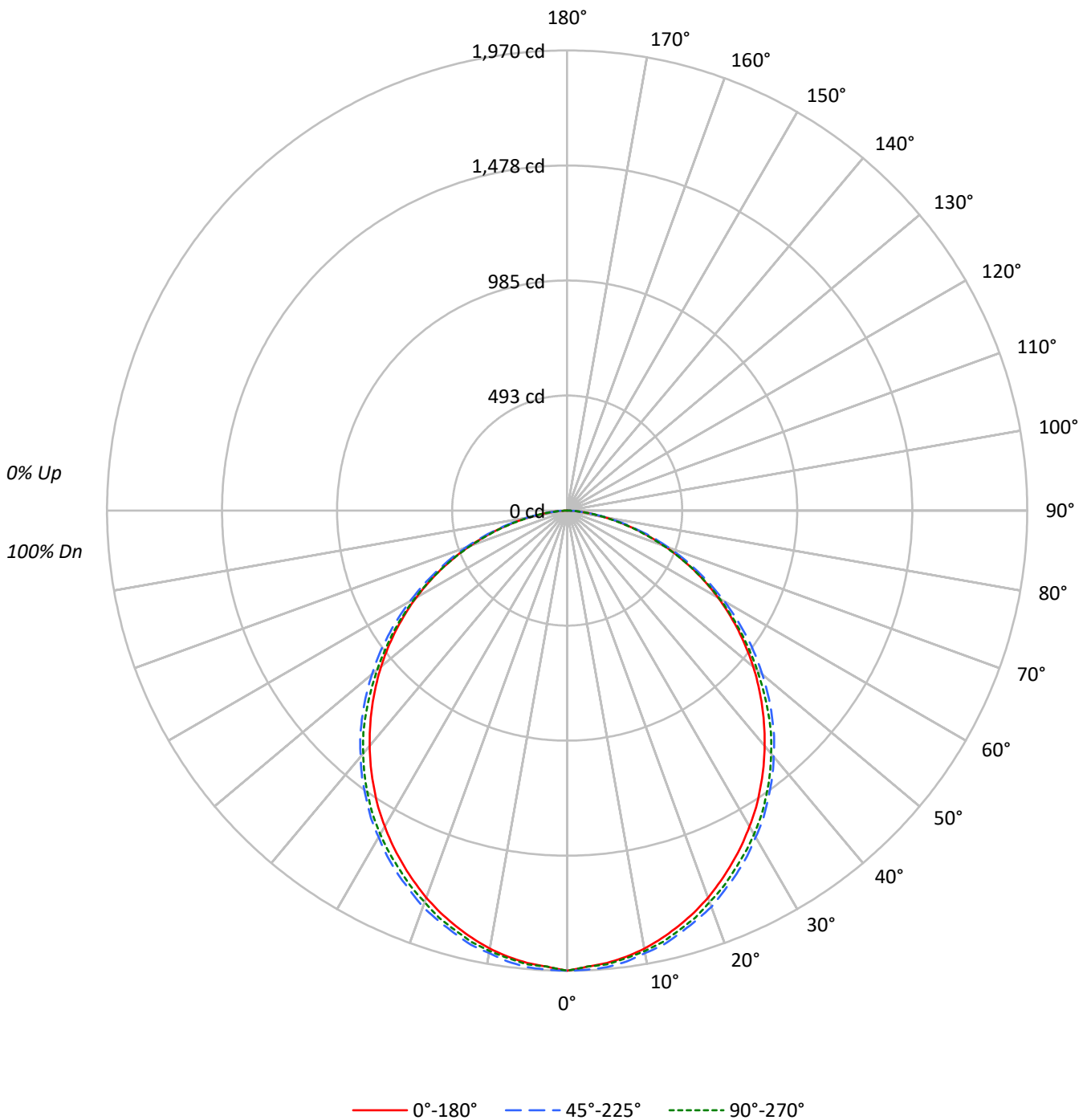
Lumens per Lamp: N/A  
Luminaire Lumens: 5178.7 lumens  
Efficiency: N/A  
Efficacy: 110.7 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

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°	2650	2650	2650
5°	2626	2650	2634
10°	2602	2628	2616
15°	2566	2607	2589
20°	2525	2585	2554
25°	2476	2548	2519
30°	2426	2508	2486
35°	2371	2465	2443
40°	2310	2416	2386
45°	2245	2358	2314
50°	2178	2283	2223
55°	2099	2197	2129
60°	2009	2093	2028
65°	1894	1966	1895
70°	1742	1812	1723
75°	1534	1604	1511
80°	1247	1301	1233
85°	868	925	903



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	185.5	3.6
10°-20°	525.7	10.2
20°-30°	784.1	15.1
30°-40°	929.1	17.9
40°-50°	940.1	18.2
50°-60°	821.1	15.9
60°-70°	600.0	11.6
70°-80°	319.3	6.2
80°-90°	73.8	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°	1495.3	28.9
0°-40°	2424.4	46.8
0°-60°	4185.7	80.8
0°-90°	5178.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5178.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1970	1970	1970	1970	1970	
5°	1944	1948	1962	1967	1950	184
15°	1842	1854	1872	1883	1859	519
25°	1668	1688	1716	1723	1697	768
35°	1444	1466	1501	1512	1487	903
45°	1180	1201	1239	1240	1216	910
55°	895	913	936	923	908	800
65°	595	607	618	605	595	589
75°	295	302	308	297	291	314
85°	56	57	60	60	58	71
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1969.8	1969.8	1969.8	1969.8	1969.8
2.5°	1954.4	1960.8	1967.3	1970.2	1954.2
5°	1944.1	1947.8	1962.4	1966.9	1950.3
7.5°	1927.3	1932.9	1947.0	1949.1	1933.1
10°	1904.3	1914.2	1923.6	1933.9	1914.4
12.5°	1875.0	1888.3	1904.3	1906.2	1891.4
15°	1841.9	1854.2	1871.7	1883.0	1858.6
17.5°	1805.0	1816.9	1839.5	1841.5	1826.7
20°	1763.7	1778.5	1805.6	1810.3	1783.9
22.5°	1717.0	1736.9	1759.4	1763.9	1744.5
25°	1667.9	1688.4	1716.3	1722.7	1696.6
27.5°	1616.6	1636.3	1667.7	1672.2	1650.3
30°	1561.6	1580.1	1614.5	1622.1	1599.8
32.5°	1505.8	1524.2	1562.4	1568.8	1547.0
35°	1443.8	1466.4	1501.0	1511.5	1487.1
37.5°	1380.6	1402.5	1441.9	1451.4	1425.1
40°	1315.1	1336.9	1375.7	1383.5	1358.2
42.5°	1248.2	1270.0	1311.4	1312.6	1291.7
45°	1179.9	1200.8	1239.4	1240.4	1216.0
47.5°	1110.5	1131.6	1166.1	1162.2	1139.2
50°	1040.3	1060.4	1090.6	1082.8	1062.1
52.5°	967.7	987.2	1015.7	1003.0	983.5
55°	894.6	912.7	936.5	922.9	907.7
57.5°	820.9	839.2	857.4	843.7	830.6
60°	746.6	762.6	777.6	763.7	753.6
62.5°	671.1	684.9	697.8	684.4	675.0
65°	594.8	606.9	617.5	605.2	595.2
67.5°	518.8	529.1	538.9	526.2	515.7
70°	442.9	451.7	460.7	447.6	438.0
72.5°	368.0	375.8	383.8	371.1	362.6
75°	295.1	301.9	308.5	297.2	290.6
77.5°	225.5	231.3	235.8	228.6	222.3
80°	160.9	165.2	167.9	165.0	159.1
82.5°	103.4	106.5	108.0	107.7	103.8
85°	56.2	57.3	59.9	60.5	58.5
87.5°	21.8	23.2	23.8	25.7	23.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)