

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: P489658

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-3LO-20-120-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: P489658
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-LD4-3LO-20-120-EDD-90
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

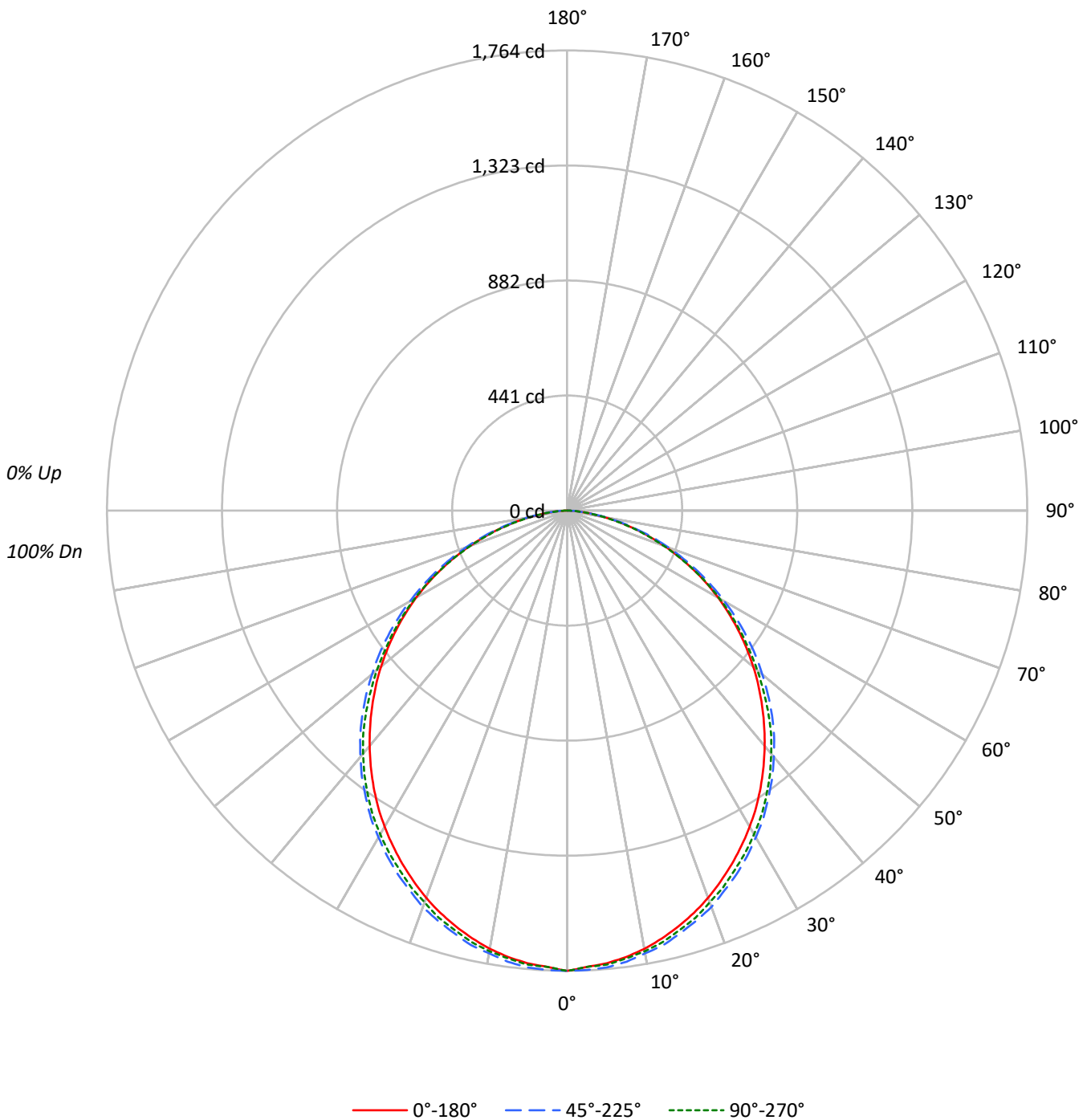
Lumens per Lamp: N/A
Luminaire Lumens: 4639.1 lumens
Efficiency: N/A
Efficacy: 66.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
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°	2374	2374	2374
5°	2352	2374	2360
10°	2331	2354	2343
15°	2298	2336	2319
20°	2262	2316	2288
25°	2218	2283	2256
30°	2173	2247	2227
35°	2124	2209	2188
40°	2069	2164	2137
45°	2011	2112	2073
50°	1951	2045	1991
55°	1880	1968	1907
60°	1800	1875	1817
65°	1696	1761	1698
70°	1561	1624	1543
75°	1375	1436	1353
80°	1117	1165	1104
85°	778	829	809



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	166.2	3.6
10°-20°	470.9	10.2
20°-30°	702.4	15.1
30°-40°	832.3	17.9
40°-50°	842.2	18.2
50°-60°	735.5	15.9
60°-70°	537.5	11.6
70°-80°	286.0	6.2
80°-90°	66.1	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°	1339.5	28.9
0°-40°	2171.8	46.8
0°-60°	3749.5	80.8
0°-90°	4639.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4639.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1764	1764	1764	1764	1764	
5°	1742	1745	1758	1762	1747	165
15°	1650	1661	1677	1687	1665	465
25°	1494	1512	1538	1543	1520	688
35°	1293	1314	1345	1354	1332	809
45°	1057	1076	1110	1111	1089	815
55°	801	818	839	827	813	716
65°	533	544	553	542	533	527
75°	264	270	276	266	260	281
85°	50	51	54	54	52	64
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1764.5	1764.5	1764.5	1764.5	1764.5
2.5°	1750.8	1756.5	1762.3	1764.9	1750.6
5°	1741.6	1744.9	1757.9	1762.0	1747.1
7.5°	1726.5	1731.5	1744.1	1746.0	1731.6
10°	1705.9	1714.7	1723.2	1732.4	1714.9
12.5°	1679.6	1691.6	1705.9	1707.6	1694.3
15°	1650.0	1661.0	1676.7	1686.8	1664.9
17.5°	1616.9	1627.6	1647.8	1649.6	1636.4
20°	1580.0	1593.2	1617.5	1621.7	1598.0
22.5°	1538.1	1555.9	1576.1	1580.2	1562.7
25°	1494.1	1512.5	1537.5	1543.2	1519.9
27.5°	1448.2	1465.8	1493.9	1498.0	1478.3
30°	1398.9	1415.4	1446.3	1453.1	1433.1
32.5°	1348.9	1365.4	1399.6	1405.3	1385.8
35°	1293.4	1313.6	1344.6	1354.0	1332.1
37.5°	1236.7	1256.4	1291.7	1300.2	1276.6
40°	1178.1	1197.6	1232.3	1239.3	1216.7
42.5°	1118.1	1137.6	1174.8	1175.9	1157.1
45°	1056.9	1075.7	1110.2	1111.2	1089.3
47.5°	994.8	1013.7	1044.6	1041.1	1020.5
50°	931.9	949.9	977.0	970.0	951.4
52.5°	866.8	884.3	909.9	898.5	881.0
55°	801.4	817.6	838.9	826.8	813.1
57.5°	735.4	751.7	768.1	755.8	744.0
60°	668.8	683.2	696.6	684.1	675.1
62.5°	601.2	613.5	625.1	613.1	604.7
65°	532.8	543.6	553.2	542.2	533.2
67.5°	464.8	474.0	482.8	471.4	462.0
70°	396.7	404.6	412.7	401.0	392.3
72.5°	329.6	336.6	343.8	332.4	324.9
75°	264.4	270.4	276.3	266.2	260.3
77.5°	202.0	207.2	211.2	204.8	199.1
80°	144.1	148.0	150.4	147.8	142.5
82.5°	92.7	95.4	96.7	96.5	93.0
85°	50.4	51.3	53.7	54.2	52.4
87.5°	19.5	20.8	21.3	23.0	21.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)