

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: P489659

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-3LO-20-120-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: P489659
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
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

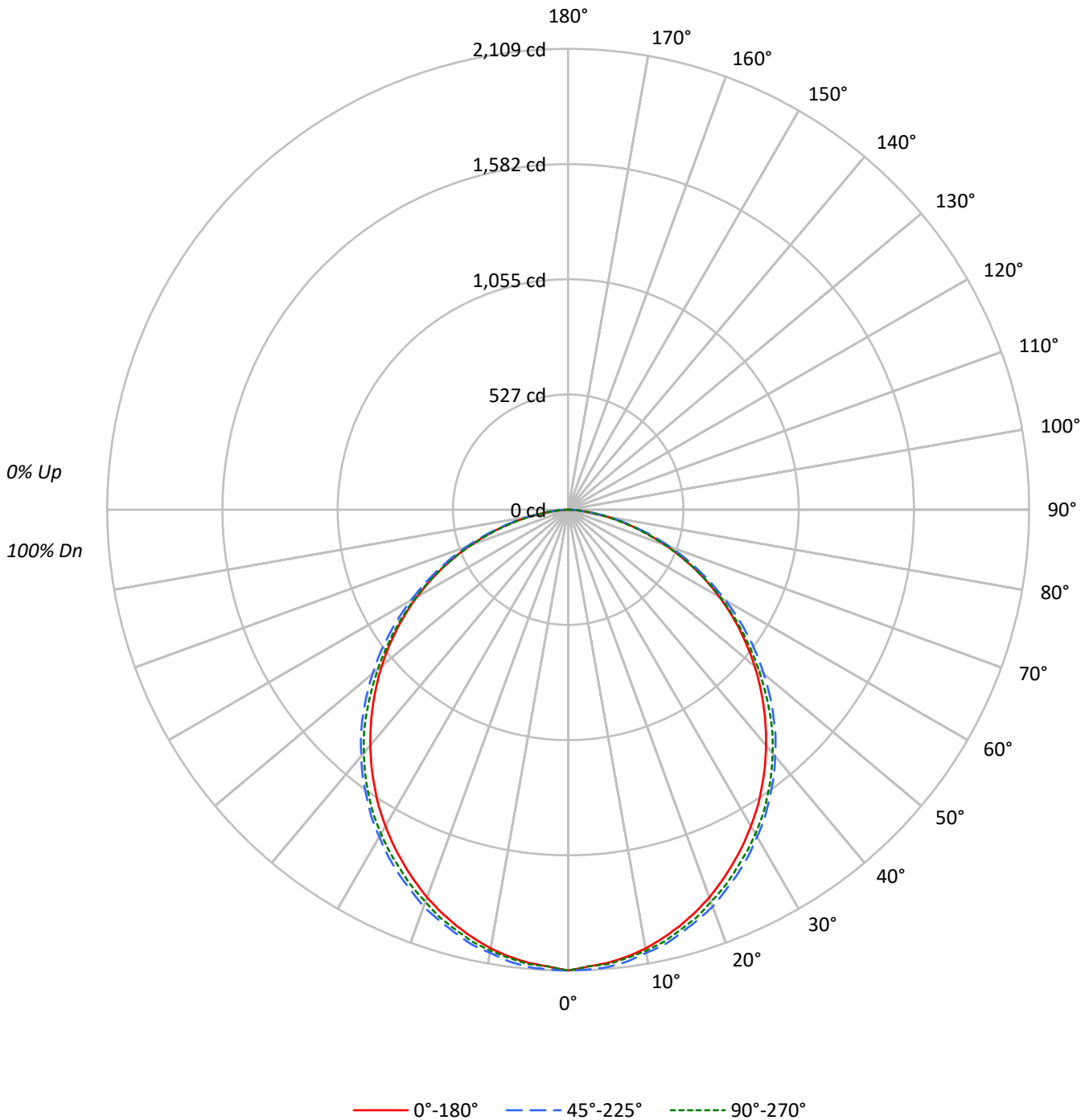
Lumens per Lamp: N/A
Luminaire Lumens: 5544.2 lumens
Efficiency: N/A
Efficacy: 79.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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	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°	2837	2837	2837
5°	2811	2838	2820
10°	2785	2814	2800
15°	2747	2791	2772
20°	2704	2768	2735
25°	2651	2728	2697
30°	2597	2685	2661
35°	2539	2640	2615
40°	2473	2587	2554
45°	2403	2525	2477
50°	2331	2444	2380
55°	2247	2352	2280
60°	2151	2240	2171
65°	2027	2105	2029
70°	1865	1941	1845
75°	1642	1717	1617
80°	1335	1392	1320
85°	929	991	966



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	198.6	3.6
10°-20°	562.8	10.2
20°-30°	839.4	15.1
30°-40°	994.7	17.9
40°-50°	1006.5	18.2
50°-60°	879.0	15.9
60°-70°	642.3	11.6
70°-80°	341.8	6.2
80°-90°	79.0	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°	1600.8	28.9
0°-40°	2595.5	46.8
0°-60°	4481.1	80.8
0°-90°	5544.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5544.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2109	2109	2109	2109	2109	
5°	2081	2085	2101	2106	2088	197
15°	1972	1985	2004	2016	1990	556
25°	1786	1808	1838	1844	1816	823
35°	1546	1570	1607	1618	1592	967
45°	1263	1286	1327	1328	1302	974
55°	958	977	1003	988	972	856
65°	637	650	661	648	637	630
75°	316	323	330	318	311	336
85°	60	61	64	65	63	76
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2108.8	2108.8	2108.8	2108.8	2108.8
2.5°	2092.3	2099.1	2106.2	2109.3	2092.1
5°	2081.4	2085.3	2100.9	2105.7	2087.9
7.5°	2063.3	2069.3	2084.4	2086.6	2069.5
10°	2038.7	2049.3	2059.4	2070.4	2049.5
12.5°	2007.3	2021.6	2038.7	2040.7	2024.9
15°	1971.9	1985.1	2003.8	2015.9	1989.7
17.5°	1932.4	1945.1	1969.3	1971.5	1955.7
20°	1888.2	1904.0	1933.0	1938.1	1909.8
22.5°	1838.1	1859.4	1883.6	1888.4	1867.6
25°	1785.6	1807.6	1837.5	1844.3	1816.4
27.5°	1730.7	1751.8	1785.4	1790.2	1766.7
30°	1671.8	1691.6	1728.5	1736.6	1712.7
32.5°	1612.0	1631.8	1672.7	1679.5	1656.2
35°	1545.7	1569.9	1607.0	1618.2	1592.0
37.5°	1478.0	1501.5	1543.7	1553.8	1525.7
40°	1407.9	1431.2	1472.7	1481.1	1454.1
42.5°	1336.3	1359.6	1404.0	1405.3	1382.9
45°	1263.1	1285.5	1326.9	1328.0	1301.8
47.5°	1188.9	1211.5	1248.4	1244.2	1219.6
50°	1113.7	1135.3	1167.6	1159.2	1137.0
52.5°	1036.0	1056.8	1087.4	1073.7	1052.9
55°	957.7	977.1	1002.6	988.1	971.8
57.5°	878.9	898.4	918.0	903.2	889.2
60°	799.3	816.5	832.5	817.6	806.8
62.5°	718.5	733.2	747.0	732.7	722.6
65°	636.7	649.7	661.1	647.9	637.2
67.5°	555.4	566.4	577.0	563.3	552.1
70°	474.1	483.6	493.3	479.2	468.9
72.5°	393.9	402.3	410.9	397.2	388.2
75°	315.9	323.2	330.2	318.1	311.1
77.5°	241.5	247.6	252.5	244.8	238.0
80°	172.3	176.9	179.7	176.7	170.3
82.5°	110.7	114.0	115.6	115.3	111.2
85°	60.2	61.3	64.2	64.8	62.6
87.5°	23.3	24.8	25.5	27.5	25.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)