

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: P488676

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-2HI-27-120-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: P488676
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-LD4-2HI-27-120-EDD-90
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

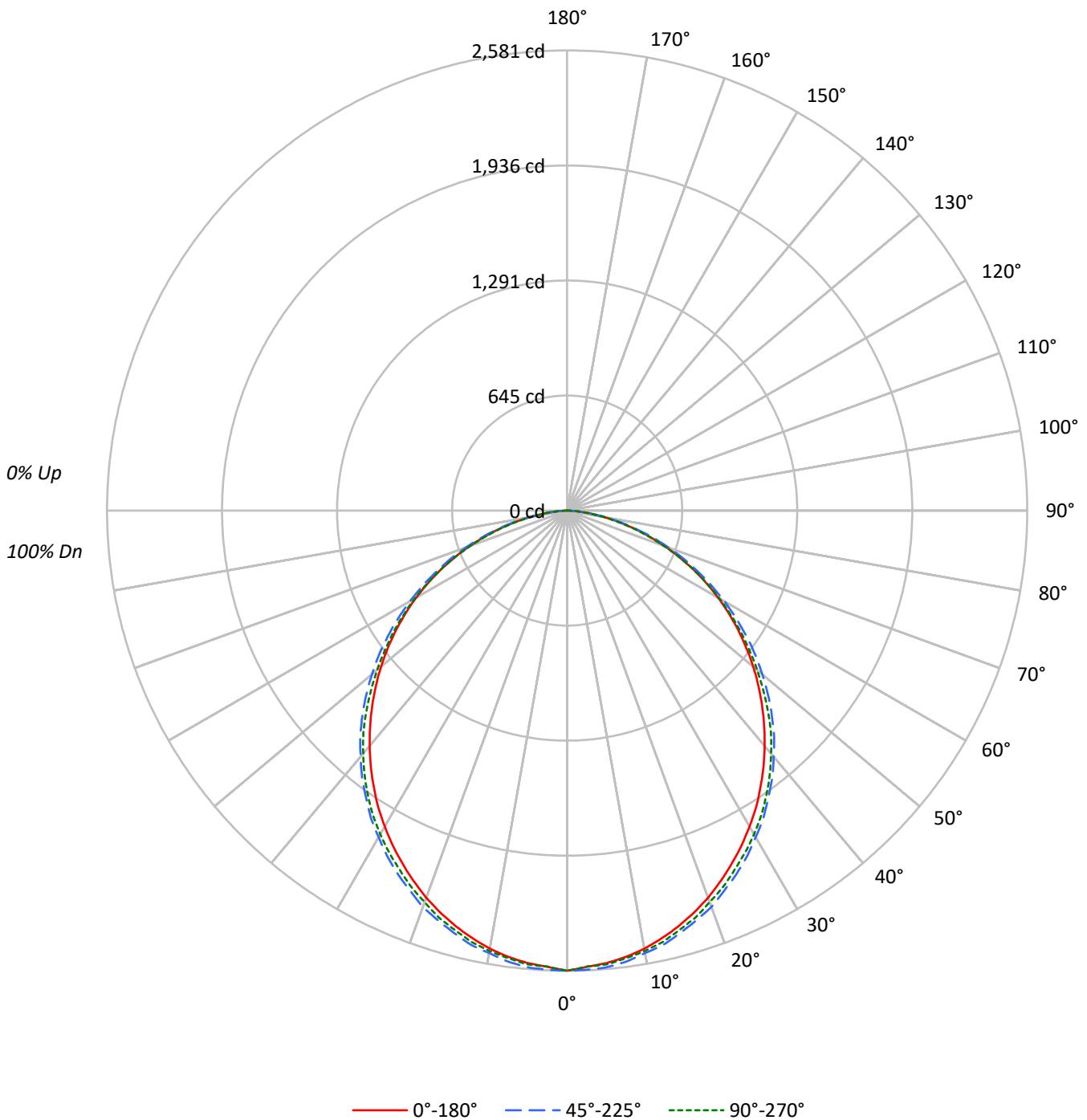
Lumens per Lamp: N/A
Luminaire Lumens: 6785.0 lumens
Efficiency: N/A
Efficacy: 78.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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°	6945	6945	6945
5°	6881	6945	6902
10°	6818	6887	6854
15°	6723	6832	6784
20°	6617	6775	6693
25°	6488	6677	6600
30°	6357	6573	6513
35°	6214	6460	6401
40°	6053	6331	6251
45°	5883	6180	6063
50°	5706	5982	5825
55°	5499	5756	5580
60°	5265	5483	5314
65°	4961	5152	4965
70°	4566	4750	4515
75°	4021	4201	3958
80°	3267	3408	3230
85°	2276	2424	2365



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	243.1	3.6
10°-20°	688.8	10.2
20°-30°	1027.3	15.1
30°-40°	1217.3	17.9
40°-50°	1231.7	18.2
50°-60°	1075.7	15.9
60°-70°	786.1	11.6
70°-80°	418.3	6.2
80°-90°	96.7	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°	1959.1	28.9
0°-40°	3176.4	46.8
0°-60°	5483.9	80.8
0°-90°	6785.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6785.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2581	2581	2581	2581	2581	
5°	2547	2552	2571	2577	2555	242
15°	2413	2429	2452	2467	2435	680
25°	2185	2212	2249	2257	2223	1007
35°	1892	1921	1967	1980	1948	1183
45°	1546	1573	1624	1625	1593	1193
55°	1172	1196	1227	1209	1189	1048
65°	779	795	809	793	780	771
75°	387	396	404	389	381	411
85°	74	75	78	79	77	93
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2580.8	2580.8	2580.8	2580.8	2580.8
2.5°	2560.6	2568.9	2577.5	2581.3	2560.3
5°	2547.2	2552.0	2571.1	2577.0	2555.2
7.5°	2525.1	2532.4	2550.9	2553.6	2532.6
10°	2495.0	2507.9	2520.3	2533.7	2508.2
12.5°	2456.5	2474.0	2495.0	2497.4	2478.1
15°	2413.3	2429.4	2452.2	2467.0	2435.0
17.5°	2364.9	2380.5	2410.0	2412.7	2393.4
20°	2310.8	2330.2	2365.7	2371.8	2337.2
22.5°	2249.5	2275.6	2305.2	2311.1	2285.5
25°	2185.2	2212.1	2248.7	2257.0	2222.9
27.5°	2118.0	2143.8	2185.0	2190.9	2162.1
30°	2046.0	2070.2	2115.3	2125.3	2096.0
32.5°	1972.8	1997.0	2047.0	2055.4	2026.9
35°	1891.6	1921.2	1966.6	1980.3	1948.4
37.5°	1808.8	1837.6	1889.2	1901.6	1867.1
40°	1723.0	1751.5	1802.3	1812.6	1779.5
42.5°	1635.4	1663.9	1718.2	1719.8	1692.4
45°	1545.8	1573.3	1623.8	1625.1	1593.2
47.5°	1454.9	1482.6	1527.8	1522.7	1492.6
50°	1363.0	1389.3	1428.9	1418.6	1391.5
52.5°	1267.8	1293.3	1330.7	1314.0	1288.5
55°	1172.1	1195.7	1226.9	1209.2	1189.3
57.5°	1075.5	1099.5	1123.4	1105.4	1088.2
60°	978.2	999.2	1018.8	1000.5	987.4
62.5°	879.3	897.3	914.2	896.7	884.4
65°	779.2	795.1	809.1	792.9	779.8
67.5°	679.7	693.2	706.1	689.4	675.7
70°	580.3	591.8	603.7	586.4	573.8
72.5°	482.1	492.3	502.8	486.1	475.1
75°	386.7	395.5	404.1	389.3	380.7
77.5°	295.5	303.0	309.0	299.5	291.2
80°	210.8	216.5	219.9	216.2	208.4
82.5°	135.5	139.6	141.4	141.2	136.1
85°	73.7	75.0	78.5	79.3	76.6
87.5°	28.5	30.4	31.2	33.6	30.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)