

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: P489670

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-3STD-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: P489670
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-LD4-3STD-20-120-EDD-90
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

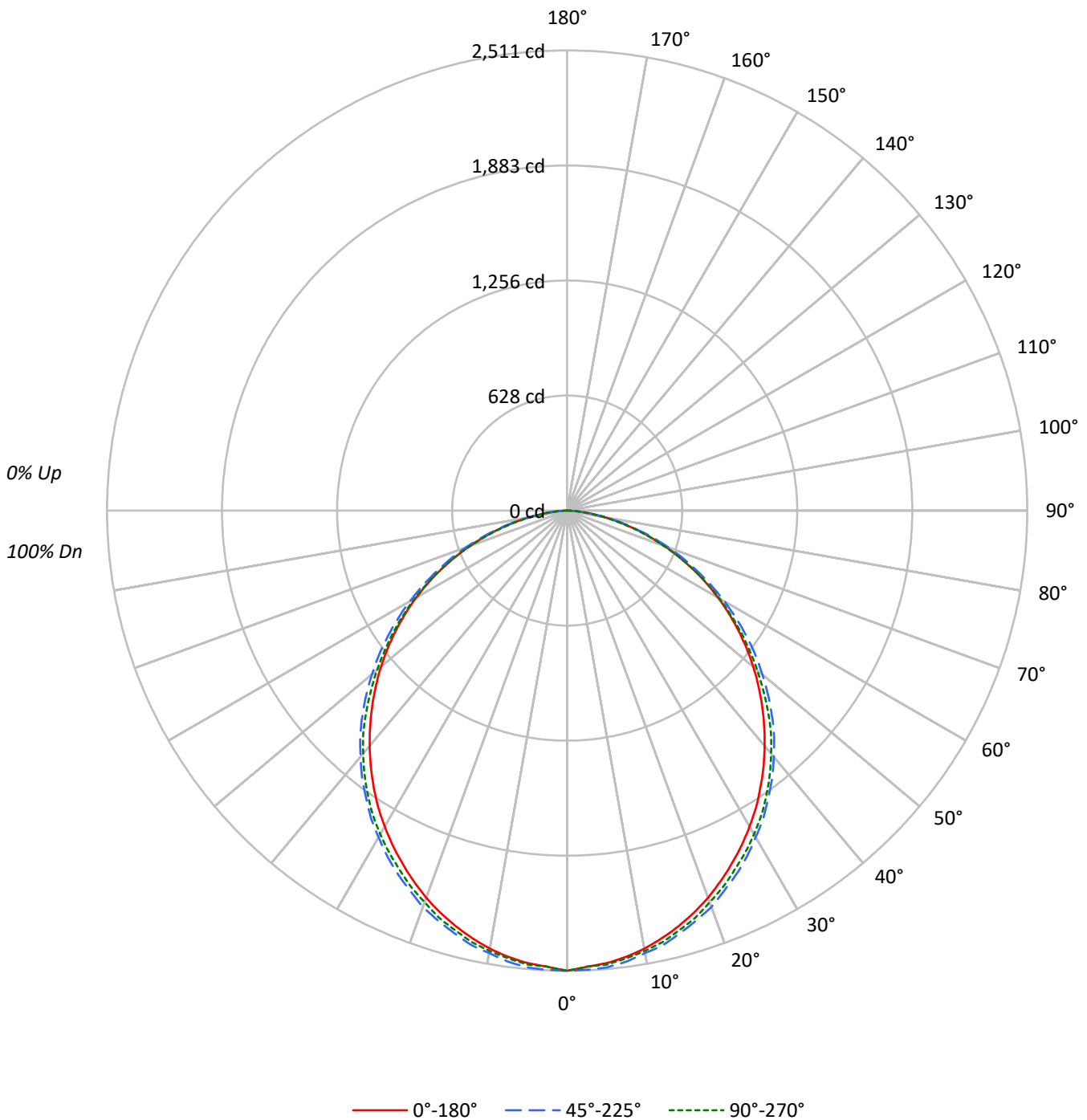
Lumens per Lamp: N/A
Luminaire Lumens: 6601.8 lumens
Efficiency: N/A
Efficacy: 66.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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°	3379	3379	3379
5°	3347	3379	3358
10°	3317	3350	3334
15°	3271	3324	3300
20°	3219	3296	3256
25°	3157	3248	3211
30°	3093	3198	3168
35°	3023	3143	3114
40°	2945	3080	3041
45°	2862	3006	2950
50°	2776	2910	2834
55°	2675	2800	2715
60°	2561	2668	2585
65°	2414	2506	2415
70°	2221	2311	2196
75°	1956	2044	1926
80°	1589	1658	1571
85°	1107	1179	1152



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	236.5	3.6
10°-20°	670.2	10.2
20°-30°	999.5	15.1
30°-40°	1184.5	17.9
40°-50°	1198.5	18.2
50°-60°	1046.7	15.9
60°-70°	764.9	11.6
70°-80°	407.0	6.2
80°-90°	94.1	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°	1906.2	28.9
0°-40°	3090.7	46.8
0°-60°	5335.9	80.8
0°-90°	6601.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6601.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2511	2511	2511	2511	2511	
5°	2478	2483	2502	2507	2486	235
15°	2348	2364	2386	2400	2369	662
25°	2126	2152	2188	2196	2163	980
35°	1840	1869	1914	1927	1896	1151
45°	1504	1531	1580	1581	1550	1160
55°	1140	1164	1194	1176	1157	1019
65°	758	774	787	772	759	750
75°	376	385	393	379	370	400
85°	72	73	76	77	75	91
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2511.1	2511.1	2511.1	2511.1	2511.1
2.5°	2491.5	2499.6	2508.0	2511.6	2491.2
5°	2478.4	2483.1	2501.7	2507.4	2486.2
7.5°	2456.9	2464.0	2482.0	2484.7	2464.3
10°	2427.6	2440.2	2452.2	2465.3	2440.5
12.5°	2390.2	2407.2	2427.6	2430.0	2411.1
15°	2348.1	2363.8	2386.0	2400.4	2369.3
17.5°	2301.0	2316.2	2345.0	2347.6	2328.7
20°	2248.4	2267.3	2301.8	2307.8	2274.1
22.5°	2188.8	2214.1	2242.9	2248.7	2223.8
25°	2126.2	2152.4	2188.0	2196.1	2162.9
27.5°	2060.8	2085.9	2126.0	2131.7	2103.7
30°	1990.7	2014.3	2058.2	2067.9	2039.4
32.5°	1919.6	1943.1	1991.8	1999.9	1972.1
35°	1840.5	1869.3	1913.5	1926.9	1895.7
37.5°	1760.0	1788.0	1838.2	1850.2	1816.7
40°	1676.5	1704.2	1753.7	1763.6	1731.4
42.5°	1591.2	1618.9	1671.8	1673.4	1646.7
45°	1504.1	1530.8	1580.0	1581.3	1550.1
47.5°	1415.7	1442.6	1486.6	1481.6	1452.3
50°	1326.2	1351.8	1390.3	1380.3	1353.9
52.5°	1233.6	1258.4	1294.8	1278.6	1253.7
55°	1140.4	1163.5	1193.8	1176.5	1157.2
57.5°	1046.5	1069.8	1093.1	1075.5	1058.8
60°	951.8	972.2	991.3	973.5	960.7
62.5°	855.5	873.0	889.5	872.5	860.5
65°	758.2	773.6	787.2	771.5	758.7
67.5°	661.4	674.5	687.0	670.8	657.5
70°	564.6	575.8	587.4	570.6	558.3
72.5°	469.1	479.0	489.2	473.0	462.3
75°	376.2	384.9	393.2	378.8	370.5
77.5°	287.5	294.9	300.6	291.5	283.3
80°	205.1	210.6	214.0	210.3	202.8
82.5°	131.9	135.8	137.6	137.4	132.4
85°	71.7	73.0	76.4	77.2	74.6
87.5°	27.7	29.6	30.3	32.7	30.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)