

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: P489169

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-4STD-27-120-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: P489169
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-24-2-INS-A19156-LD4-4STD-27-120-EDD
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

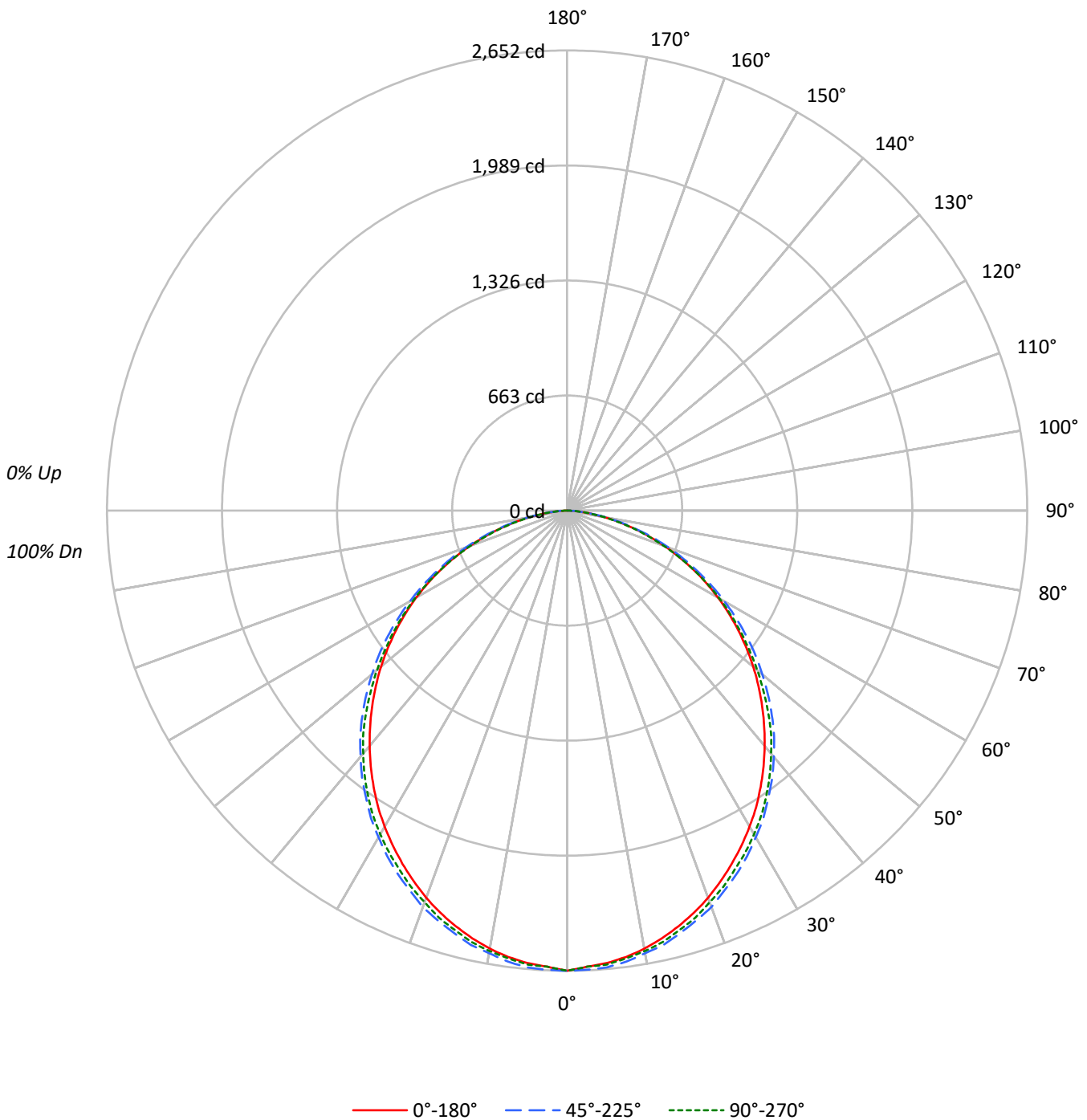
Lumens per Lamp: N/A
Luminaire Lumens: 6972.9 lumens
Efficiency: N/A
Efficacy: 104.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
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	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°	7137	7137	7137
5°	7071	7138	7094
10°	7006	7077	7043
15°	6909	7021	6972
20°	6801	6962	6878
25°	6668	6862	6783
30°	6533	6755	6693
35°	6386	6639	6578
40°	6220	6507	6424
45°	6046	6351	6231
50°	5864	6147	5987
55°	5651	5916	5734
60°	5410	5635	5461
65°	5099	5294	5103
70°	4692	4881	4640
75°	4132	4318	4068
80°	3357	3502	3319
85°	2337	2492	2433



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	249.8	3.6
10°-20°	707.9	10.2
20°-30°	1055.7	15.1
30°-40°	1251.0	17.9
40°-50°	1265.9	18.2
50°-60°	1105.5	15.9
60°-70°	807.9	11.6
70°-80°	429.9	6.2
80°-90°	99.4	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°	2013.4	28.9
0°-40°	3264.4	46.8
0°-60°	5635.8	80.8
0°-90°	6972.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6972.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2652	2652	2652	2652	2652	
5°	2618	2623	2642	2648	2626	248
15°	2480	2497	2520	2535	2502	699
25°	2246	2273	2311	2320	2284	1035
35°	1944	1974	2021	2035	2002	1216
45°	1589	1617	1669	1670	1637	1226
55°	1204	1229	1261	1243	1222	1077
65°	801	817	832	815	801	792
75°	397	406	415	400	391	422
85°	76	77	81	82	79	96
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2652.2	2652.2	2652.2	2652.2	2652.2
2.5°	2631.5	2640.1	2648.9	2652.8	2631.2
5°	2617.7	2622.7	2642.3	2648.4	2626.0
7.5°	2595.0	2602.5	2621.6	2624.3	2602.8
10°	2564.1	2577.4	2590.1	2603.9	2577.6
12.5°	2524.6	2542.5	2564.1	2566.6	2546.7
15°	2480.1	2496.7	2520.2	2535.4	2502.5
17.5°	2430.3	2446.4	2476.8	2479.5	2459.6
20°	2374.8	2394.7	2431.2	2437.5	2401.9
22.5°	2311.8	2338.6	2369.0	2375.1	2348.8
25°	2245.8	2273.4	2311.0	2319.5	2284.4
27.5°	2176.7	2203.2	2245.5	2251.6	2222.0
30°	2102.6	2127.5	2173.9	2184.1	2154.0
32.5°	2027.5	2052.3	2103.7	2112.3	2083.0
35°	1944.0	1974.4	2021.1	2035.2	2002.3
37.5°	1858.9	1888.5	1941.5	1954.2	1918.9
40°	1770.7	1800.0	1852.3	1862.8	1828.8
42.5°	1680.7	1709.9	1765.8	1767.4	1739.2
45°	1588.6	1616.8	1668.8	1670.2	1637.3
47.5°	1495.2	1523.7	1570.1	1564.9	1533.9
50°	1400.7	1427.8	1468.4	1457.9	1430.0
52.5°	1302.9	1329.2	1367.6	1350.4	1324.2
55°	1204.5	1228.9	1260.9	1242.7	1222.2
57.5°	1105.3	1129.9	1154.5	1136.0	1118.3
60°	1005.3	1026.9	1047.0	1028.2	1014.7
62.5°	903.6	922.1	939.5	921.6	908.9
65°	800.8	817.1	831.5	814.9	801.4
67.5°	698.6	712.4	725.7	708.5	694.4
70°	596.3	608.2	620.4	602.7	589.7
72.5°	495.5	506.0	516.7	499.6	488.3
75°	397.4	406.5	415.3	400.1	391.3
77.5°	303.7	311.4	317.5	307.8	299.3
80°	216.6	222.4	226.0	222.2	214.2
82.5°	139.3	143.4	145.4	145.1	139.8
85°	75.7	77.1	80.7	81.5	78.8
87.5°	29.3	31.2	32.1	34.5	31.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)