

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: P489625

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-2LO-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: P489625
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-LD4-2LO-27-120-EDD
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

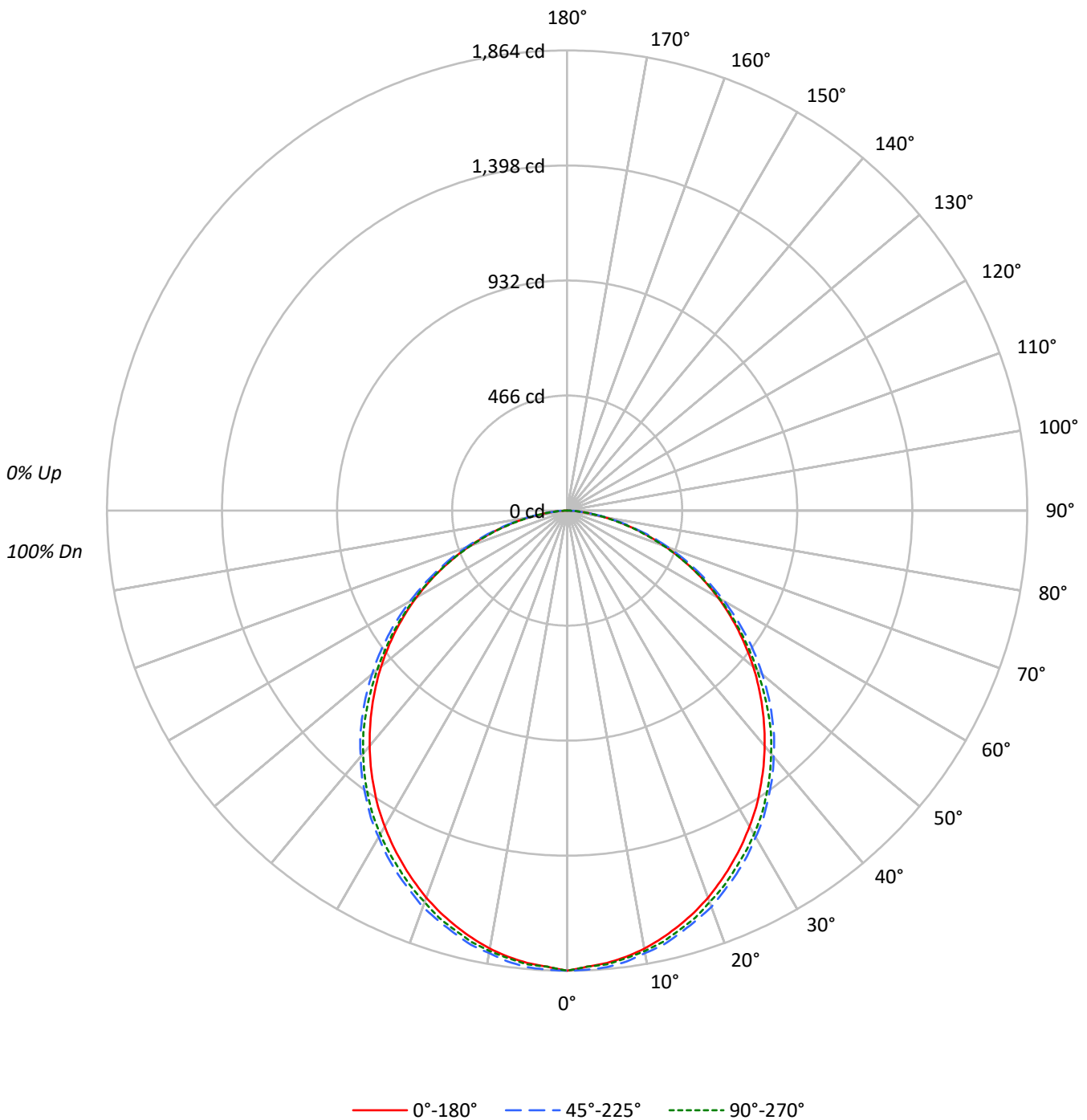
Lumens per Lamp: N/A
Luminaire Lumens: 4900.1 lumens
Efficiency: N/A
Efficacy: 104.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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°	2508	2508	2508
5°	2485	2508	2492
10°	2462	2487	2475
15°	2428	2467	2450
20°	2390	2446	2417
25°	2343	2411	2383
30°	2296	2373	2352
35°	2244	2333	2311
40°	2186	2286	2257
45°	2124	2231	2189
50°	2060	2160	2103
55°	1986	2079	2015
60°	1901	1980	1919
65°	1792	1860	1793
70°	1649	1715	1630
75°	1451	1517	1430
80°	1179	1230	1166
85°	821	875	854



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	175.5	3.6
10°-20°	497.4	10.2
20°-30°	741.9	15.1
30°-40°	879.2	17.9
40°-50°	889.6	18.2
50°-60°	776.9	15.9
60°-70°	567.7	11.6
70°-80°	302.1	6.2
80°-90°	69.8	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°	1414.9	28.9
0°-40°	2294.0	46.8
0°-60°	3960.5	80.8
0°-90°	4900.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4900.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1864	1864	1864	1864	1864	
5°	1840	1843	1857	1861	1845	174
15°	1743	1754	1771	1782	1759	491
25°	1578	1598	1624	1630	1605	727
35°	1366	1388	1420	1430	1407	854
45°	1116	1136	1173	1174	1151	861
55°	846	864	886	873	859	757
65°	563	574	584	573	563	557
75°	279	286	292	281	275	297
85°	53	54	57	57	55	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1863.8	1863.8	1863.8	1863.8	1863.8
2.5°	1849.3	1855.3	1861.5	1864.2	1849.1
5°	1839.6	1843.0	1856.8	1861.1	1845.4
7.5°	1823.6	1828.9	1842.3	1844.2	1829.1
10°	1801.9	1811.2	1820.1	1829.8	1811.4
12.5°	1774.1	1786.7	1801.9	1803.6	1789.6
15°	1742.8	1754.5	1771.0	1781.7	1758.6
17.5°	1707.9	1719.2	1740.5	1742.5	1728.5
20°	1668.9	1682.8	1708.5	1712.9	1687.9
22.5°	1624.6	1643.4	1664.8	1669.1	1650.6
25°	1578.2	1597.6	1624.0	1630.0	1605.4
27.5°	1529.6	1548.3	1578.0	1582.2	1561.5
30°	1477.6	1495.1	1527.7	1534.9	1513.7
32.5°	1424.8	1442.2	1478.4	1484.4	1463.8
35°	1366.1	1387.5	1420.3	1430.2	1407.1
37.5°	1306.3	1327.1	1364.4	1373.3	1348.4
40°	1244.4	1264.9	1301.6	1309.0	1285.1
42.5°	1181.1	1201.6	1240.9	1242.0	1222.2
45°	1116.4	1136.2	1172.7	1173.7	1150.6
47.5°	1050.8	1070.8	1103.4	1099.7	1077.9
50°	984.3	1003.4	1031.9	1024.5	1004.9
52.5°	915.6	934.0	961.0	949.0	930.6
55°	846.5	863.6	886.1	873.3	858.9
57.5°	776.8	794.0	811.3	798.3	785.9
60°	706.5	721.6	735.8	722.6	713.1
62.5°	635.0	648.0	660.2	647.6	638.7
65°	562.8	574.2	584.3	572.7	563.1
67.5°	490.9	500.6	509.9	497.9	488.0
70°	419.1	427.4	436.0	423.5	414.4
72.5°	348.2	355.6	363.1	351.1	343.1
75°	279.2	285.7	291.9	281.2	275.0
77.5°	213.4	218.9	223.1	216.3	210.3
80°	152.2	156.3	158.8	156.1	150.5
82.5°	97.9	100.8	102.1	101.9	98.3
85°	53.2	54.2	56.7	57.3	55.3
87.5°	20.6	21.9	22.5	24.3	22.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)