

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: P489163

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-4LO-40-120-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: P489163
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-LD4-4LO-40-120-EDD
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

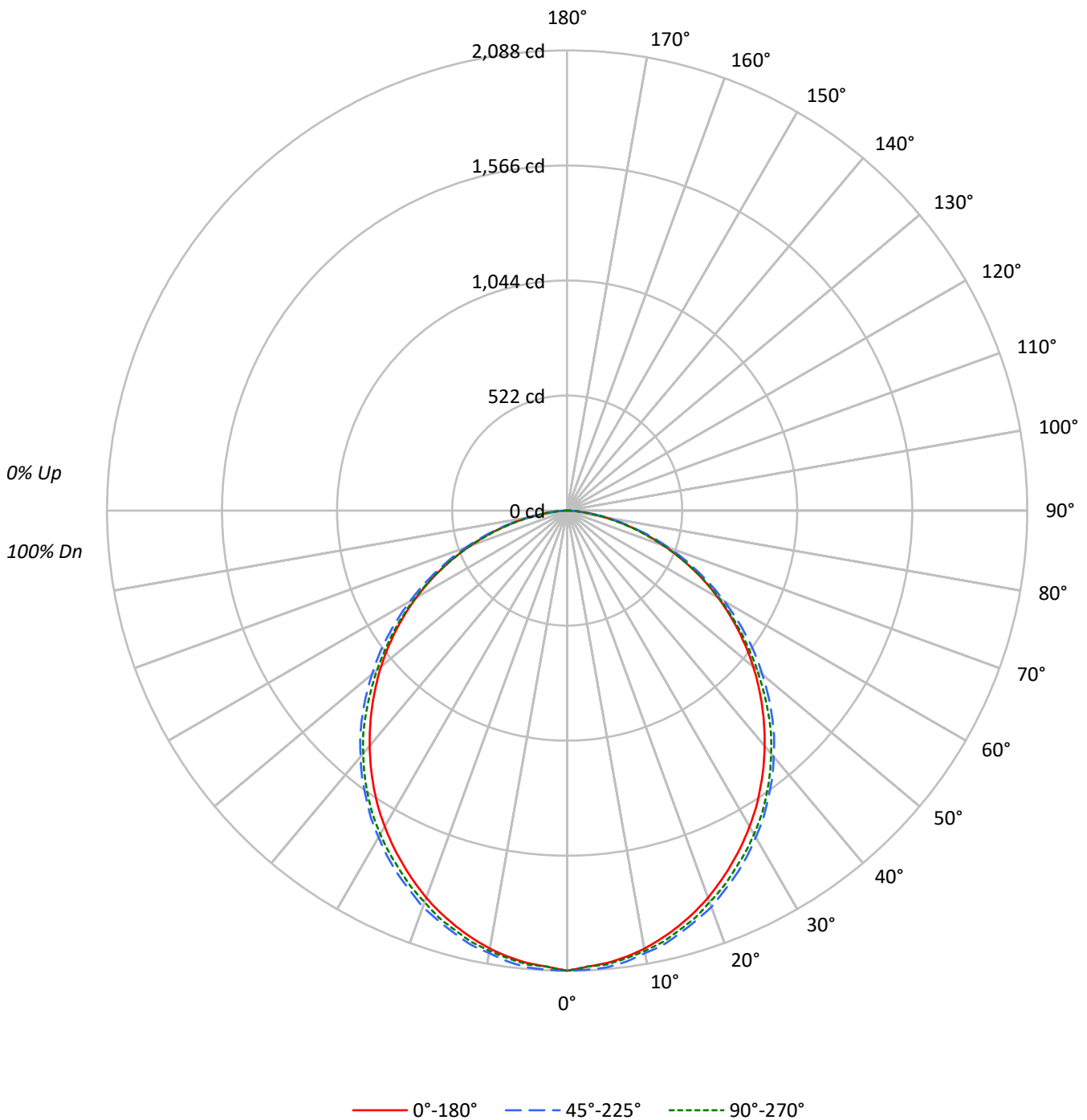
Lumens per Lamp: N/A
Luminaire Lumens: 5489.6 lumens
Efficiency: N/A
Efficacy: 117.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	5619	5619	5619
5°	5567	5619	5585
10°	5516	5572	5545
15°	5439	5528	5489
20°	5354	5481	5415
25°	5249	5402	5340
30°	5143	5318	5269
35°	5028	5227	5179
40°	4897	5122	5057
45°	4760	5000	4905
50°	4617	4840	4713
55°	4449	4657	4514
60°	4259	4436	4299
65°	4015	4168	4017
70°	3694	3843	3653
75°	3252	3400	3203
80°	2644	2758	2613
85°	1840	1961	1914



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	196.7	3.6
10°-20°	557.3	10.2
20°-30°	831.1	15.1
30°-40°	984.9	17.9
40°-50°	996.6	18.2
50°-60°	870.4	15.9
60°-70°	636.0	11.6
70°-80°	338.4	6.2
80°-90°	78.2	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°	1585.1	28.9
0°-40°	2570.0	46.8
0°-60°	4436.9	80.8
0°-90°	5489.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5489.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2088	2088	2088	2088	2088	
5°	2061	2065	2080	2085	2067	195
15°	1952	1966	1984	1996	1970	550
25°	1768	1790	1819	1826	1798	815
35°	1530	1554	1591	1602	1576	957
45°	1251	1273	1314	1315	1289	965
55°	948	967	993	978	962	848
65°	630	643	655	642	631	624
75°	313	320	327	315	308	333
85°	60	61	64	64	62	75
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2088.0	2088.0	2088.0	2088.0	2088.0
2.5°	2071.7	2078.5	2085.4	2088.5	2071.5
5°	2060.9	2064.8	2080.2	2085.0	2067.4
7.5°	2043.0	2048.9	2063.9	2066.1	2049.1
10°	2018.6	2029.1	2039.1	2050.0	2029.3
12.5°	1987.5	2001.7	2018.6	2020.6	2004.9
15°	1952.5	1965.6	1984.1	1996.0	1970.1
17.5°	1913.4	1926.0	1949.9	1952.1	1936.4
20°	1869.6	1885.3	1914.0	1919.0	1890.9
22.5°	1820.0	1841.1	1865.1	1869.8	1849.2
25°	1768.0	1789.8	1819.4	1826.1	1798.5
27.5°	1713.6	1734.5	1767.8	1772.6	1749.3
30°	1655.3	1674.9	1711.5	1719.5	1695.8
32.5°	1596.2	1615.7	1656.2	1663.0	1639.9
35°	1530.5	1554.4	1591.2	1602.3	1576.4
37.5°	1463.5	1486.7	1528.5	1538.5	1510.7
40°	1394.1	1417.1	1458.2	1466.5	1439.7
42.5°	1323.1	1346.2	1390.1	1391.5	1369.3
45°	1250.7	1272.9	1313.8	1314.9	1289.0
47.5°	1177.2	1199.6	1236.1	1232.0	1207.6
50°	1102.8	1124.1	1156.1	1147.8	1125.8
52.5°	1025.8	1046.4	1076.7	1063.2	1042.5
55°	948.3	967.4	992.7	978.3	962.2
57.5°	870.2	889.6	908.9	894.3	880.4
60°	791.4	808.4	824.3	809.5	798.8
62.5°	711.4	726.0	739.7	725.5	715.5
65°	630.5	643.3	654.6	641.6	630.9
67.5°	550.0	560.8	571.3	557.8	546.7
70°	469.5	478.8	488.4	474.5	464.3
72.5°	390.1	398.3	406.8	393.3	384.4
75°	312.8	320.0	327.0	315.0	308.1
77.5°	239.1	245.2	250.0	242.4	235.6
80°	170.6	175.1	178.0	174.9	168.6
82.5°	109.6	112.9	114.4	114.2	110.1
85°	59.6	60.7	63.5	64.2	62.0
87.5°	23.1	24.6	25.2	27.2	25.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)