

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: P489133

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-3STD-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: P489133
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-LD4-3STD-27-120-EDD
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

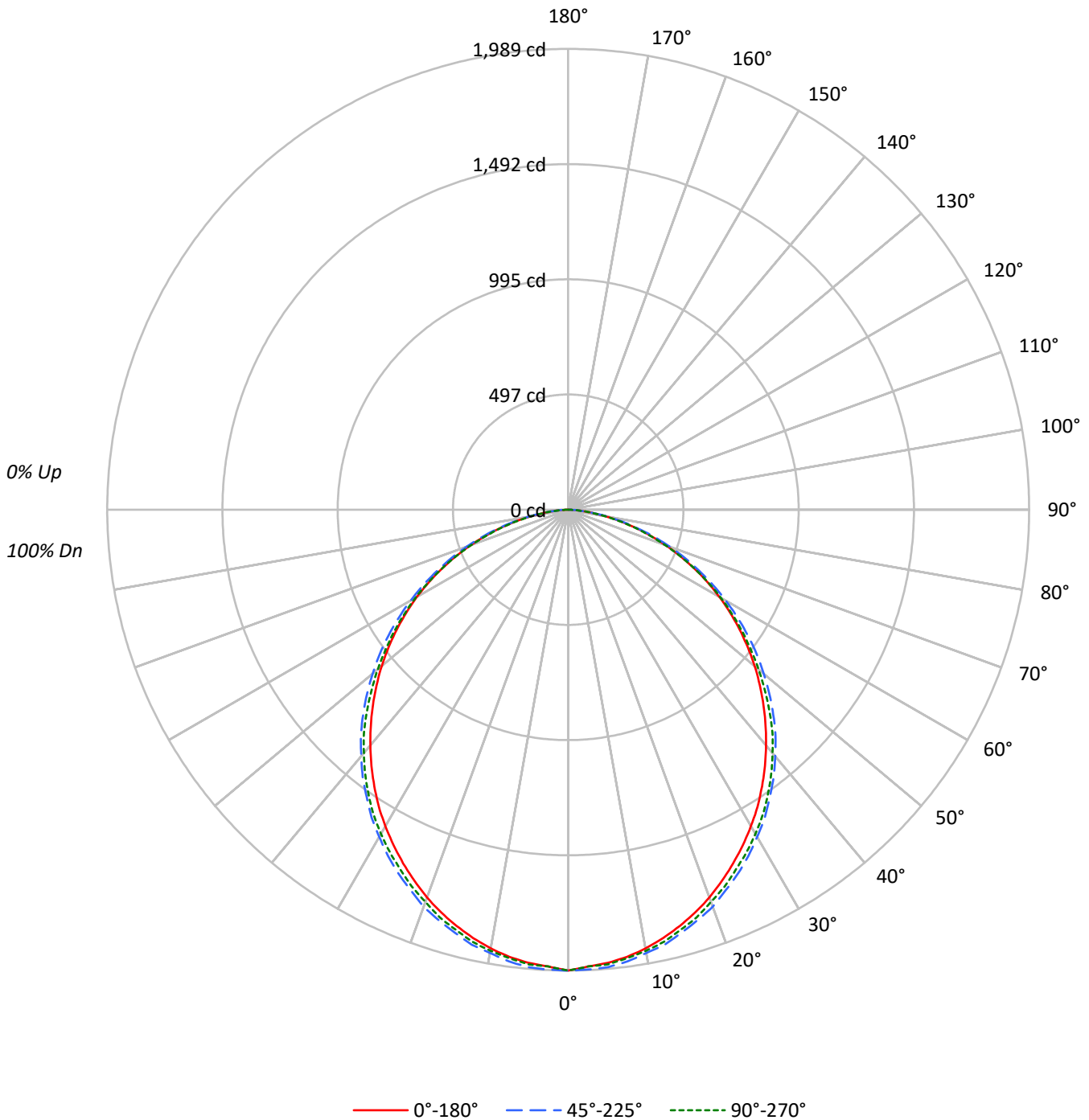
Lumens per Lamp: N/A
Luminaire Lumens: 5229.7 lumens
Efficiency: N/A
Efficacy: 104.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 50
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°	5353	5353	5353
5°	5303	5353	5320
10°	5255	5308	5282
15°	5182	5266	5229
20°	5101	5222	5159
25°	5001	5146	5087
30°	4900	5066	5020
35°	4790	4980	4933
40°	4665	4880	4818
45°	4534	4763	4673
50°	4398	4611	4490
55°	4238	4437	4301
60°	4058	4226	4096
65°	3824	3971	3827
70°	3519	3661	3480
75°	3098	3239	3052
80°	2518	2627	2489
85°	1754	1868	1825



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	187.3	3.6
10°-20°	530.9	10.2
20°-30°	791.8	15.1
30°-40°	938.3	17.9
40°-50°	949.4	18.2
50°-60°	829.2	15.9
60°-70°	605.9	11.6
70°-80°	322.4	6.2
80°-90°	74.5	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°	1510.0	28.9
0°-40°	2448.3	46.8
0°-60°	4226.9	80.8
0°-90°	5229.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5229.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1989	1989	1989	1989	1989	
5°	1963	1967	1982	1986	1970	186
15°	1860	1872	1890	1902	1877	524
25°	1684	1705	1733	1740	1713	776
35°	1458	1481	1516	1526	1502	912
45°	1192	1213	1252	1253	1228	919
55°	903	922	946	932	917	808
65°	601	613	624	611	601	594
75°	298	305	312	300	294	317
85°	57	58	60	61	59	72
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1989.2	1989.2	1989.2	1989.2	1989.2
2.5°	1973.6	1980.1	1986.7	1989.6	1973.4
5°	1963.3	1967.0	1981.7	1986.3	1969.5
7.5°	1946.3	1951.9	1966.2	1968.3	1952.1
10°	1923.1	1933.0	1942.6	1952.9	1933.2
12.5°	1893.4	1906.9	1923.1	1924.9	1910.0
15°	1860.1	1872.5	1890.1	1901.5	1876.9
17.5°	1822.8	1834.8	1857.6	1859.7	1844.7
20°	1781.1	1796.0	1823.4	1828.2	1801.4
22.5°	1733.9	1754.0	1776.8	1781.3	1761.6
25°	1684.3	1705.1	1733.2	1739.7	1713.3
27.5°	1632.5	1652.4	1684.1	1688.7	1666.5
30°	1577.0	1595.6	1630.4	1638.1	1615.5
32.5°	1520.6	1539.3	1577.8	1584.2	1562.3
35°	1458.0	1480.8	1515.8	1526.4	1501.7
37.5°	1394.2	1416.4	1456.1	1465.7	1439.1
40°	1328.1	1350.0	1389.2	1397.1	1371.6
42.5°	1260.5	1282.5	1324.3	1325.6	1304.4
45°	1191.5	1212.6	1251.6	1252.6	1228.0
47.5°	1121.4	1142.8	1177.6	1173.7	1150.4
50°	1050.6	1070.9	1101.3	1093.5	1072.5
52.5°	977.2	996.9	1025.7	1012.8	993.1
55°	903.4	921.6	945.7	932.0	916.7
57.5°	829.0	847.4	865.9	852.0	838.7
60°	754.0	770.1	785.3	771.2	761.0
62.5°	677.7	691.6	704.7	691.2	681.6
65°	600.6	612.8	623.6	611.2	601.0
67.5°	523.9	534.3	544.2	531.4	520.8
70°	447.2	456.2	465.3	452.0	442.3
72.5°	371.6	379.5	387.6	374.7	366.2
75°	298.0	304.9	311.5	300.1	293.5
77.5°	227.8	233.6	238.1	230.9	224.5
80°	162.5	166.8	169.5	166.6	160.6
82.5°	104.5	107.6	109.0	108.8	104.9
85°	56.8	57.8	60.5	61.1	59.1
87.5°	22.0	23.4	24.0	25.9	23.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)