

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: P489167

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-4STD-20-120-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: P489167
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-20-120-EDD
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

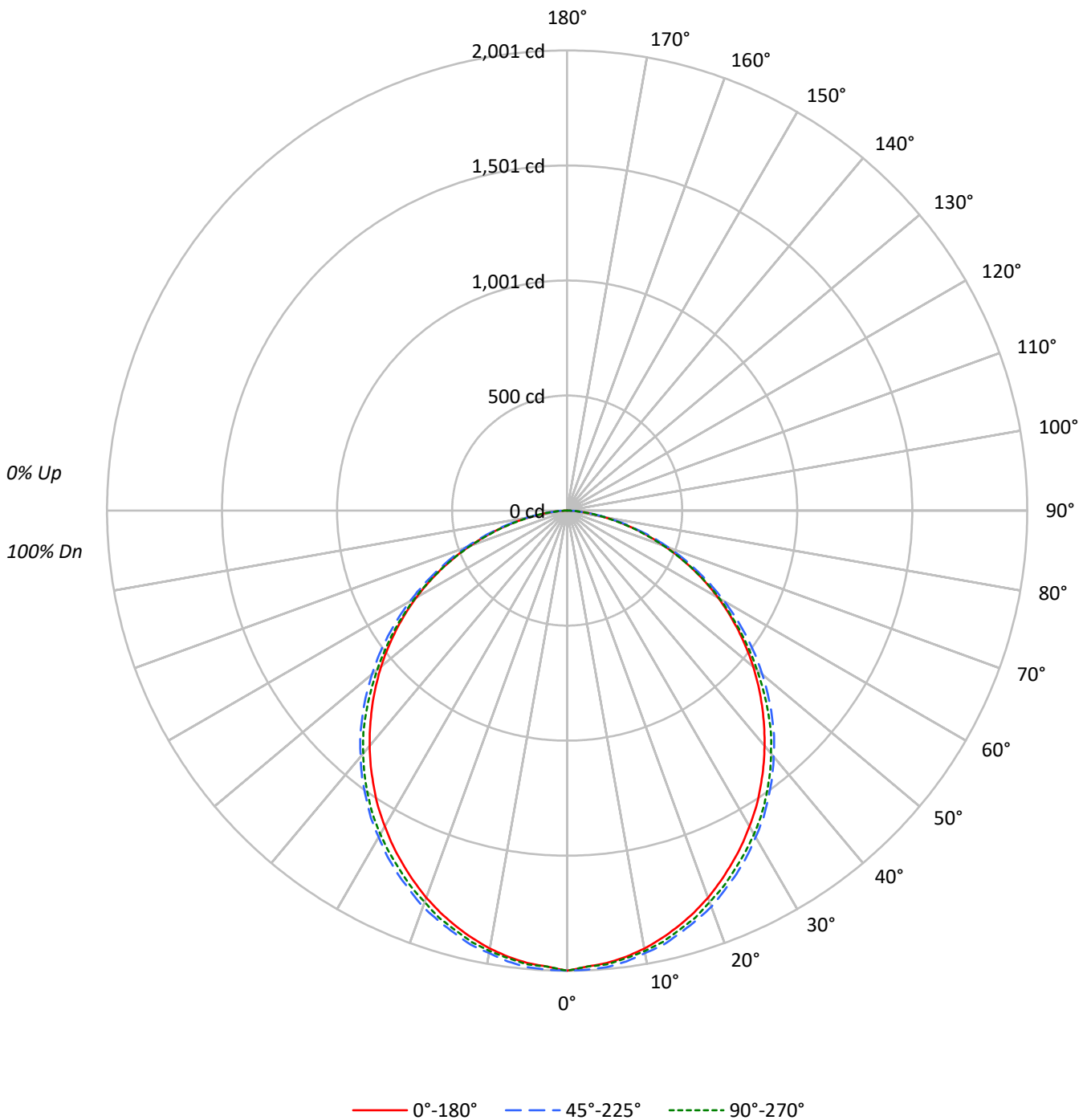
Lumens per Lamp: N/A
Luminaire Lumens: 5259.6 lumens
Efficiency: N/A
Efficacy: 79.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P489167

CATALOG NUMBER: CLM-24-2-INS-A19156-LD4-4STD-20-120-EDD

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°	5384	5384	5384
5°	5334	5384	5351
10°	5285	5338	5313
15°	5212	5296	5259
20°	5130	5251	5188
25°	5030	5176	5116
30°	4928	5095	5049
35°	4817	5008	4961
40°	4692	4908	4846
45°	4560	4790	4700
50°	4423	4637	4516
55°	4263	4462	4325
60°	4081	4251	4119
65°	3846	3994	3849
70°	3539	3681	3500
75°	3116	3257	3068
80°	2532	2642	2503
85°	1763	1880	1834



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	188.4	3.6
10°-20°	533.9	10.2
20°-30°	796.3	15.1
30°-40°	943.7	17.9
40°-50°	954.8	18.2
50°-60°	833.9	15.9
60°-70°	609.4	11.6
70°-80°	324.2	6.2
80°-90°	75.0	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°	1518.7	28.9
0°-40°	2462.3	46.8
0°-60°	4251.0	80.8
0°-90°	5259.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5259.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2001	2001	2001	2001	2001	
5°	1974	1978	1993	1998	1981	187
15°	1871	1883	1901	1912	1888	527
25°	1694	1715	1743	1750	1723	780
35°	1466	1489	1524	1535	1510	917
45°	1198	1220	1259	1260	1235	924
55°	909	927	951	937	922	812
65°	604	616	627	615	604	598
75°	300	307	313	302	295	319
85°	57	58	61	62	59	72
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2000.6	2000.6	2000.6	2000.6	2000.6
2.5°	1984.9	1991.4	1998.1	2001.0	1984.7
5°	1974.5	1978.3	1993.1	1997.6	1980.8
7.5°	1957.4	1963.0	1977.4	1979.5	1963.3
10°	1934.1	1944.1	1953.7	1964.1	1944.3
12.5°	1904.3	1917.8	1934.1	1935.9	1920.9
15°	1870.7	1883.2	1900.9	1912.4	1887.6
17.5°	1833.2	1845.3	1868.2	1870.3	1855.3
20°	1791.3	1806.3	1833.8	1838.6	1811.7
22.5°	1743.8	1764.0	1786.9	1791.5	1771.7
25°	1694.0	1714.8	1743.1	1749.6	1723.1
27.5°	1641.8	1661.9	1693.7	1698.3	1676.0
30°	1586.0	1604.7	1639.8	1647.5	1624.8
32.5°	1529.3	1548.1	1586.8	1593.3	1571.2
35°	1466.3	1489.3	1524.5	1535.1	1510.3
37.5°	1402.1	1424.4	1464.5	1474.1	1447.4
40°	1335.7	1357.7	1397.1	1405.1	1379.4
42.5°	1267.7	1289.8	1331.9	1333.2	1311.9
45°	1198.3	1219.6	1258.7	1259.8	1235.0
47.5°	1127.8	1149.3	1184.3	1180.4	1157.0
50°	1056.6	1077.0	1107.6	1099.7	1078.7
52.5°	982.8	1002.6	1031.5	1018.6	998.8
55°	908.6	926.9	951.1	937.3	921.9
57.5°	833.7	852.3	870.8	856.9	843.5
60°	758.3	774.5	789.8	775.6	765.4
62.5°	681.6	695.5	708.7	695.1	685.5
65°	604.0	616.3	627.2	614.7	604.5
67.5°	526.9	537.3	547.4	534.4	523.8
70°	449.8	458.8	467.9	454.6	444.8
72.5°	373.7	381.6	389.8	376.9	368.3
75°	299.7	306.6	313.3	301.8	295.1
77.5°	229.1	234.9	239.5	232.2	225.7
80°	163.4	167.8	170.5	167.6	161.5
82.5°	105.1	108.2	109.6	109.4	105.5
85°	57.1	58.2	60.9	61.5	59.4
87.5°	22.1	23.6	24.2	26.1	24.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)