

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: P489635

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-2STD-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: P489635
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-LD4-2STD-20-120-EDD
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

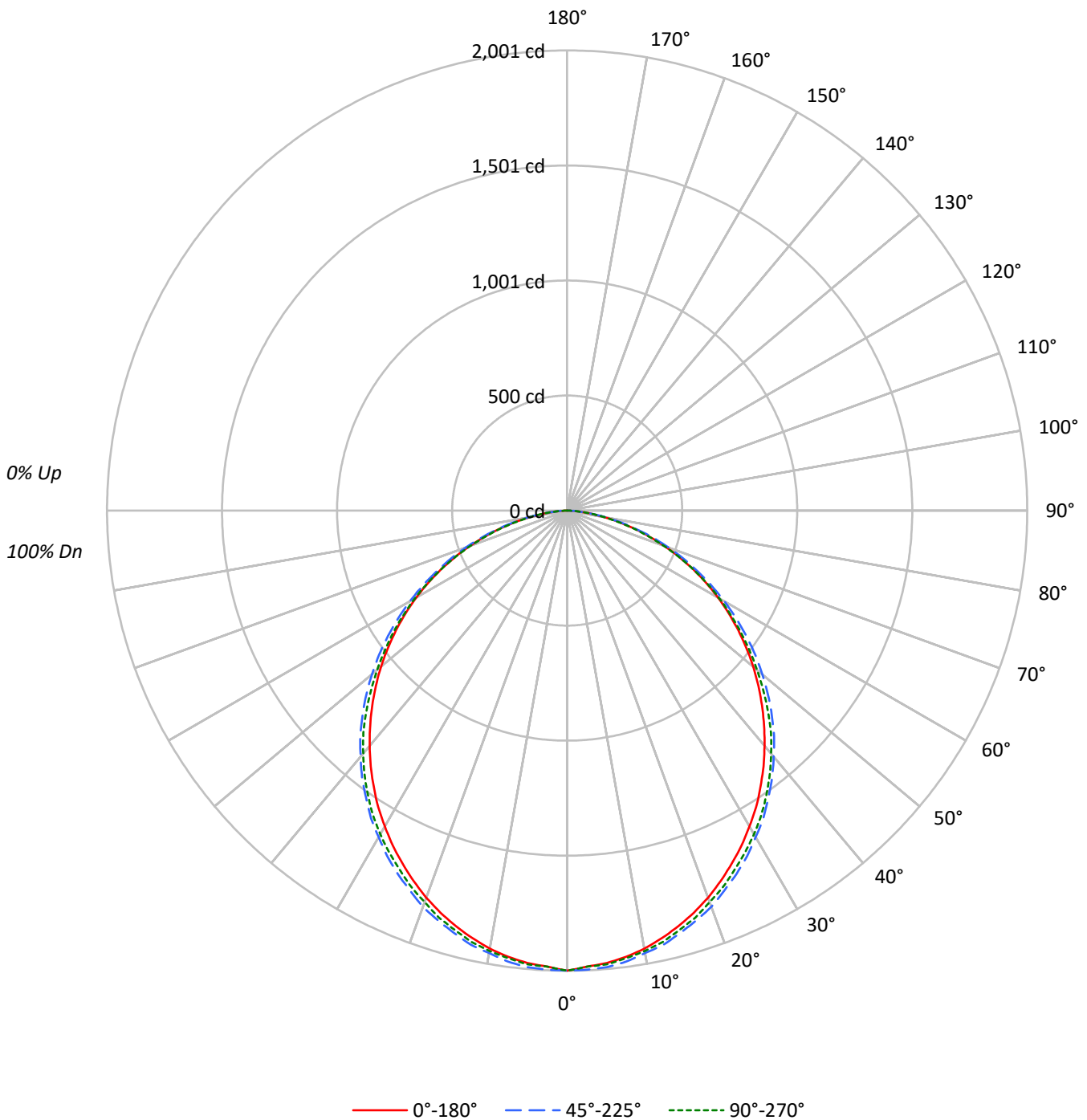
Lumens per Lamp: N/A
Luminaire Lumens: 5259.8 lumens
Efficiency: N/A
Efficacy: 79.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
Input Voltage (V): NR
Input Current (A_{in}): 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°	2692	2692	2692
5°	2667	2692	2675
10°	2642	2669	2657
15°	2606	2648	2629
20°	2565	2626	2594
25°	2515	2588	2558
30°	2464	2548	2524
35°	2409	2504	2481
40°	2346	2454	2423
45°	2280	2395	2350
50°	2212	2319	2258
55°	2131	2231	2163
60°	2041	2125	2060
65°	1923	1997	1925
70°	1769	1841	1750
75°	1558	1629	1535
80°	1266	1321	1251
85°	881	940	917



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	188.4	3.6
10°-20°	533.9	10.2
20°-30°	796.4	15.1
30°-40°	943.7	17.9
40°-50°	954.9	18.2
50°-60°	833.9	15.9
60°-70°	609.4	11.6
70°-80°	324.3	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°	2462.4	46.8
0°-60°	4251.2	80.8
0°-90°	5259.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5259.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2001	2001	2001	2001	2001	
5°	1975	1978	1993	1998	1981	187
15°	1871	1883	1901	1912	1888	527
25°	1694	1715	1743	1750	1723	780
35°	1466	1489	1525	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°	1985.0	1991.5	1998.1	2001.1	1984.8
5°	1974.6	1978.3	1993.1	1997.7	1980.8
7.5°	1957.5	1963.1	1977.5	1979.6	1963.3
10°	1934.1	1944.2	1953.7	1964.2	1944.4
12.5°	1904.3	1917.9	1934.1	1936.0	1921.0
15°	1870.8	1883.3	1901.0	1912.5	1887.7
17.5°	1833.3	1845.4	1868.3	1870.4	1855.4
20°	1791.4	1806.4	1833.9	1838.7	1811.8
22.5°	1743.8	1764.1	1787.0	1791.6	1771.8
25°	1694.0	1714.9	1743.2	1749.7	1723.2
27.5°	1641.9	1661.9	1693.8	1698.4	1676.1
30°	1586.0	1604.8	1639.8	1647.5	1624.8
32.5°	1529.3	1548.1	1586.9	1593.3	1571.2
35°	1466.4	1489.3	1524.6	1535.2	1510.4
37.5°	1402.2	1424.5	1464.5	1474.1	1447.4
40°	1335.7	1357.8	1397.2	1405.1	1379.5
42.5°	1267.8	1289.8	1332.0	1333.2	1311.9
45°	1198.3	1219.6	1258.8	1259.8	1235.0
47.5°	1127.9	1149.4	1184.4	1180.4	1157.1
50°	1056.6	1077.0	1107.7	1099.7	1078.7
52.5°	982.8	1002.6	1031.6	1018.7	998.9
55°	908.6	926.9	951.1	937.4	921.9
57.5°	833.8	852.3	870.9	856.9	843.6
60°	758.3	774.6	789.8	775.6	765.4
62.5°	681.6	695.6	708.7	695.2	685.6
65°	604.1	616.4	627.2	614.7	604.5
67.5°	526.9	537.4	547.4	534.4	523.8
70°	449.8	458.8	468.0	454.6	444.8
72.5°	373.7	381.7	389.8	376.9	368.3
75°	299.7	306.6	313.3	301.8	295.2
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)