

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: P488641

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-1HI-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: P488641
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-12-4-INS-A19156-LD4-1HI-27-120-EDD
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

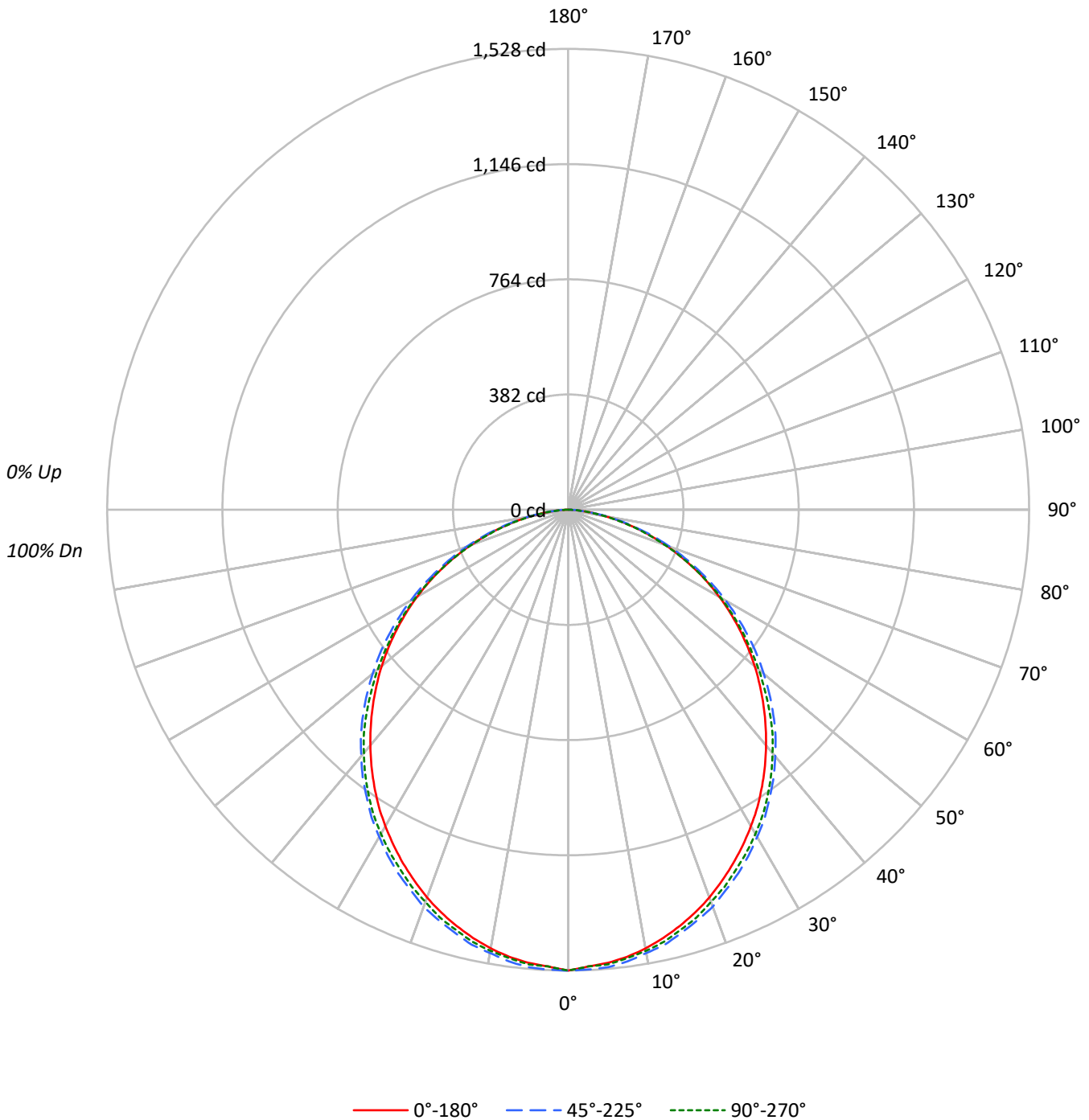
Lumens per Lamp: N/A
Luminaire Lumens: 4017.7 lumens
Efficiency: N/A
Efficacy: 93.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	109	105	100	97	106	102	98	95	98	95	92	94	92	89	91	88	87	85					85			
2	99	91	85	79	97	90	83	78	86	81	76	83	78	75	80	76	73	71					71			
3	91	80	72	66	88	79	71	65	76	70	64	73	68	63	71	66	62	60					60			
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51					51			
5	77	64	55	48	75	63	54	48	61	53	48	59	52	47	57	51	47	45					45			
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39					39			
7	66	52	44	38	64	51	43	37	50	43	37	49	42	37	47	41	37	35					35			
8	61	48	39	34	60	47	39	33	46	38	33	45	38	33	43	37	33	31					31			
9	57	44	36	30	56	43	35	30	42	35	30	41	35	30	40	34	30	28					28			
10	54	41	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25					25			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4112	4112	4112
5°	4074	4113	4087
10°	4037	4078	4058
15°	3981	4045	4017
20°	3918	4011	3963
25°	3842	3954	3908
30°	3764	3892	3856
35°	3680	3825	3790
40°	3584	3749	3701
45°	3484	3659	3590
50°	3379	3542	3450
55°	3256	3408	3304
60°	3117	3247	3147
65°	2938	3051	2940
70°	2703	2812	2674
75°	2381	2488	2345
80°	1934	2018	1912
85°	1346	1436	1402



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	143.9	3.6
10°-20°	407.9	10.2
20°-30°	608.3	15.1
30°-40°	720.8	17.9
40°-50°	729.4	18.2
50°-60°	637.0	15.9
60°-70°	465.5	11.6
70°-80°	247.7	6.2
80°-90°	57.2	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°	1160.1	28.9
0°-40°	1880.9	46.8
0°-60°	3247.3	80.8
0°-90°	4017.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4017.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1528	1528	1528	1528	1528	
5°	1508	1511	1522	1526	1513	143
15°	1429	1438	1452	1461	1442	403
25°	1294	1310	1332	1336	1316	596
35°	1120	1138	1164	1173	1154	700
45°	915	932	962	962	943	706
55°	694	708	726	716	704	620
65°	461	471	479	470	462	457
75°	229	234	239	231	226	243
85°	44	44	46	47	45	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1528.2	1528.2	1528.2	1528.2	1528.2
2.5°	1516.2	1521.2	1526.3	1528.5	1516.1
5°	1508.3	1511.2	1522.5	1526.0	1513.1
7.5°	1495.2	1499.5	1510.5	1512.1	1499.7
10°	1477.4	1485.0	1492.4	1500.3	1485.2
12.5°	1454.6	1465.0	1477.4	1478.8	1467.4
15°	1429.0	1438.5	1452.1	1460.8	1441.9
17.5°	1400.3	1409.6	1427.1	1428.7	1417.2
20°	1368.3	1379.8	1400.8	1404.5	1383.9
22.5°	1332.0	1347.5	1365.0	1368.5	1353.4
25°	1294.0	1309.9	1331.6	1336.5	1316.3
27.5°	1254.2	1269.5	1293.8	1297.3	1280.3
30°	1211.5	1225.8	1252.6	1258.5	1241.1
32.5°	1168.2	1182.5	1212.1	1217.1	1200.2
35°	1120.1	1137.6	1164.5	1172.7	1153.7
37.5°	1071.1	1088.1	1118.7	1126.0	1105.6
40°	1020.3	1037.2	1067.2	1073.3	1053.7
42.5°	968.4	985.3	1017.4	1018.4	1002.1
45°	915.4	931.6	961.5	962.3	943.4
47.5°	861.5	877.9	904.7	901.7	883.8
50°	807.1	822.7	846.1	840.0	824.0
52.5°	750.7	765.8	788.0	778.1	763.0
55°	694.0	708.0	726.5	716.0	704.2
57.5°	636.9	651.0	665.2	654.6	644.4
60°	579.2	591.7	603.3	592.5	584.7
62.5°	520.6	531.3	541.3	531.0	523.7
65°	461.4	470.8	479.1	469.5	461.7
67.5°	402.5	410.5	418.1	408.2	400.1
70°	343.6	350.4	357.4	347.3	339.8
72.5°	285.5	291.5	297.7	287.9	281.3
75°	229.0	234.2	239.3	230.6	225.5
77.5°	175.0	179.4	182.9	177.4	172.4
80°	124.8	128.2	130.2	128.0	123.4
82.5°	80.2	82.6	83.7	83.6	80.6
85°	43.6	44.4	46.5	47.0	45.4
87.5°	16.9	18.0	18.5	19.9	18.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)