

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: P488694

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-2LO-40-120-EDD-90**

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: P488694
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-LD4-2LO-40-120-EDD-90
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

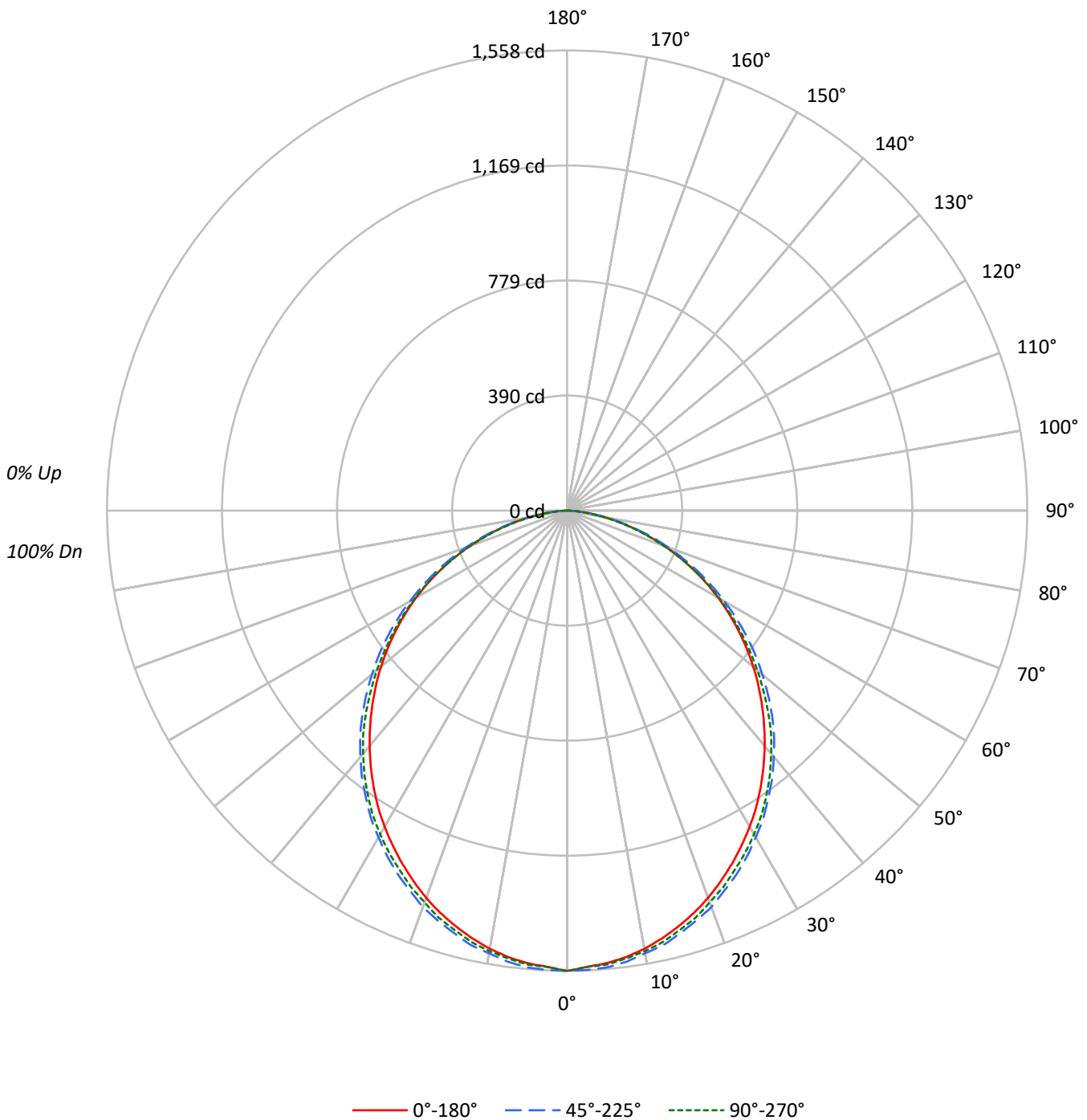
Lumens per Lamp: N/A
Luminaire Lumens: 4097.2 lumens
Efficiency: N/A
Efficacy: 87.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	4194	4194	4194
5°	4155	4194	4168
10°	4117	4159	4139
15°	4060	4125	4096
20°	3996	4091	4042
25°	3918	4032	3986
30°	3839	3969	3933
35°	3753	3901	3865
40°	3655	3823	3775
45°	3553	3732	3661
50°	3446	3612	3518
55°	3321	3476	3369
60°	3179	3311	3209
65°	2996	3111	2998
70°	2757	2868	2726
75°	2428	2537	2390
80°	1973	2058	1949
85°	1374	1463	1430



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.8	3.6
10°-20°	415.9	10.2
20°-30°	620.3	15.1
30°-40°	735.1	17.9
40°-50°	743.8	18.2
50°-60°	649.6	15.9
60°-70°	474.7	11.6
70°-80°	252.6	6.2
80°-90°	58.4	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°	1183.0	28.9
0°-40°	1918.1	46.8
0°-60°	3311.5	80.8
0°-90°	4097.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4097.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1558	1558	1558	1558	1558	
5°	1538	1541	1553	1556	1543	146
15°	1457	1467	1481	1490	1470	411
25°	1320	1336	1358	1363	1342	608
35°	1142	1160	1188	1196	1176	714
45°	934	950	981	981	962	720
55°	708	722	741	730	718	633
65°	470	480	489	479	471	466
75°	234	239	244	235	230	248
85°	44	45	47	48	46	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1558.4	1558.4	1558.4	1558.4	1558.4
2.5°	1546.3	1551.3	1556.5	1558.8	1546.1
5°	1538.1	1541.1	1552.6	1556.2	1543.0
7.5°	1524.8	1529.2	1540.4	1542.0	1529.4
10°	1506.6	1514.4	1521.9	1530.0	1514.6
12.5°	1483.4	1494.0	1506.6	1508.1	1496.4
15°	1457.3	1467.0	1480.8	1489.7	1470.4
17.5°	1428.0	1437.5	1455.3	1456.9	1445.3
20°	1395.4	1407.1	1428.5	1432.3	1411.3
22.5°	1358.4	1374.1	1392.0	1395.6	1380.1
25°	1319.6	1335.8	1357.9	1362.9	1342.3
27.5°	1279.0	1294.6	1319.4	1323.0	1305.6
30°	1235.5	1250.1	1277.4	1283.4	1265.7
32.5°	1191.3	1205.9	1236.1	1241.2	1223.9
35°	1142.3	1160.1	1187.6	1195.9	1176.5
37.5°	1092.3	1109.6	1140.8	1148.3	1127.5
40°	1040.5	1057.7	1088.4	1094.5	1074.6
42.5°	987.5	1004.7	1037.5	1038.5	1022.0
45°	933.5	950.0	980.6	981.4	962.0
47.5°	878.6	895.3	922.6	919.5	901.3
50°	823.1	839.0	862.8	856.7	840.3
52.5°	765.6	781.0	803.6	793.5	778.1
55°	707.8	722.1	740.9	730.2	718.2
57.5°	649.5	663.9	678.4	667.5	657.1
60°	590.7	603.4	615.2	604.2	596.2
62.5°	531.0	541.8	552.1	541.5	534.0
65°	470.5	480.1	488.6	478.8	470.9
67.5°	410.5	418.6	426.4	416.3	408.0
70°	350.4	357.4	364.5	354.1	346.5
72.5°	291.1	297.3	303.6	293.6	286.9
75°	233.5	238.8	244.0	235.1	229.9
77.5°	178.4	183.0	186.6	180.9	175.8
80°	127.3	130.7	132.8	130.5	125.8
82.5°	81.8	84.3	85.4	85.2	82.2
85°	44.5	45.3	47.4	47.9	46.3
87.5°	17.2	18.3	18.8	20.3	18.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)