

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: P488688

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-2LO-27-120-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: P488688  
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-27-120-EDD-90  
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

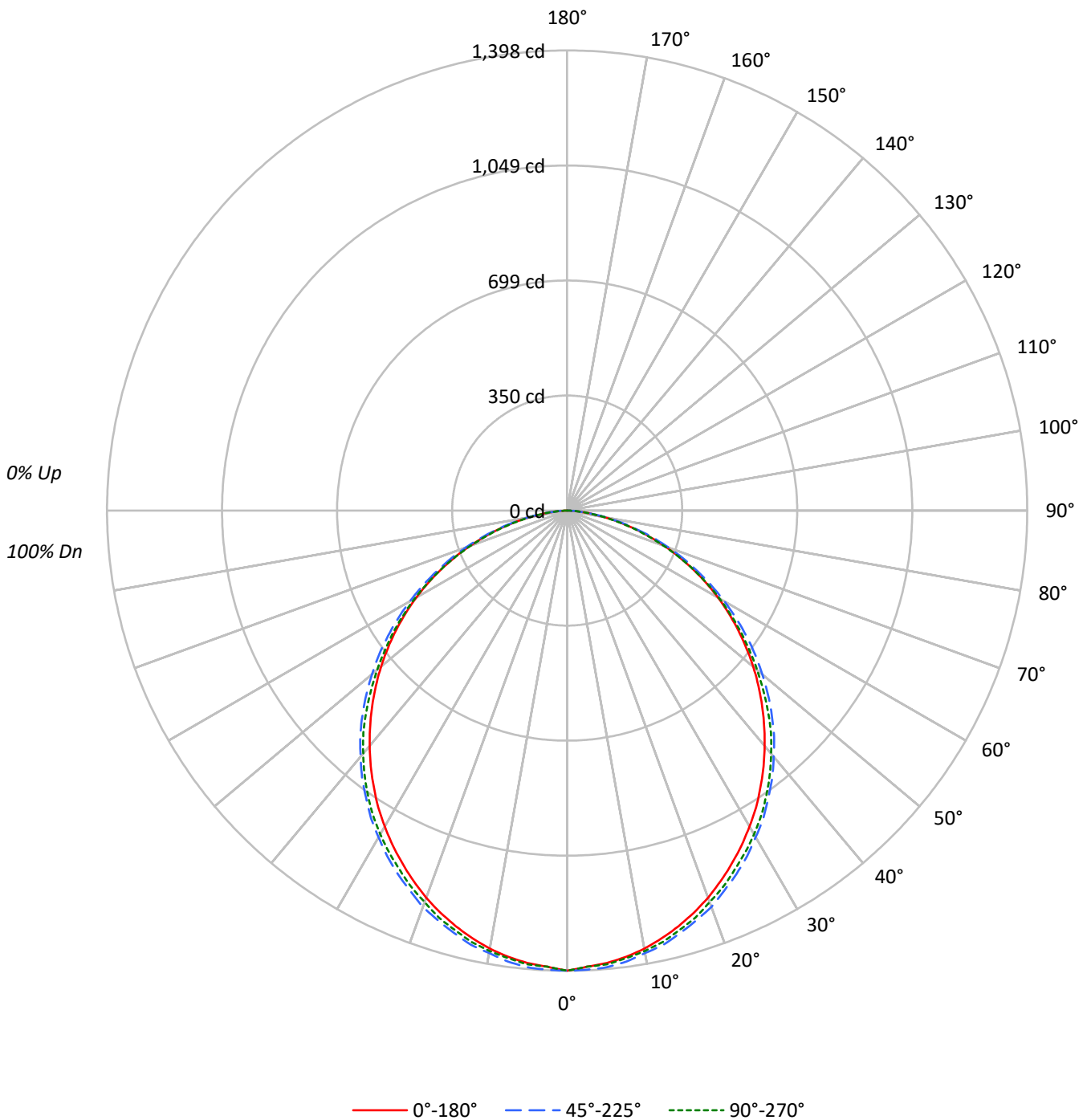
Lumens per Lamp: N/A  
Luminaire Lumens: 3675.2 lumens  
Efficiency: N/A  
Efficacy: 78.5 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	3762	3762	3762
5°	3727	3762	3739
10°	3693	3730	3712
15°	3642	3701	3675
20°	3584	3670	3625
25°	3515	3616	3575
30°	3443	3560	3528
35°	3366	3500	3467
40°	3279	3430	3386
45°	3186	3347	3284
50°	3091	3240	3155
55°	2979	3118	3022
60°	2852	2970	2878
65°	2688	2791	2690
70°	2473	2573	2445
75°	2177	2276	2144
80°	1770	1846	1750
85°	1232	1312	1281



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	131.7	3.6
10°-20°	373.1	10.2
20°-30°	556.4	15.1
30°-40°	659.4	17.9
40°-50°	667.2	18.2
50°-60°	582.7	15.9
60°-70°	425.8	11.6
70°-80°	226.6	6.2
80°-90°	52.4	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°	1061.2	28.9
0°-40°	1720.6	46.8
0°-60°	2970.5	80.8
0°-90°	3675.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3675.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1398	1398	1398	1398	1398	
5°	1380	1382	1393	1396	1384	131
15°	1307	1316	1328	1336	1319	369
25°	1184	1198	1218	1223	1204	545
35°	1025	1041	1065	1073	1055	641
45°	837	852	880	880	863	646
55°	635	648	665	655	644	568
65°	422	431	438	430	422	418
75°	209	214	219	211	206	223
85°	40	41	42	43	42	51
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1397.9	1397.9	1397.9	1397.9	1397.9
2.5°	1387.0	1391.5	1396.2	1398.2	1386.8
5°	1379.7	1382.3	1392.7	1395.9	1384.1
7.5°	1367.8	1371.7	1381.7	1383.2	1371.8
10°	1351.5	1358.4	1365.1	1372.4	1358.6
12.5°	1330.6	1340.1	1351.5	1352.8	1342.3
15°	1307.2	1315.9	1328.3	1336.3	1319.0
17.5°	1281.0	1289.4	1305.4	1306.9	1296.4
20°	1251.7	1262.2	1281.4	1284.7	1266.0
22.5°	1218.5	1232.6	1248.6	1251.8	1238.0
25°	1183.7	1198.2	1218.0	1222.6	1204.1
27.5°	1147.3	1161.2	1183.5	1186.7	1171.1
30°	1108.2	1121.3	1145.8	1151.2	1135.3
32.5°	1068.6	1081.7	1108.8	1113.3	1097.9
35°	1024.6	1040.6	1065.3	1072.7	1055.4
37.5°	979.8	995.3	1023.3	1030.0	1011.4
40°	933.3	948.7	976.3	981.8	963.9
42.5°	885.8	901.3	930.7	931.6	916.7
45°	837.3	852.2	879.6	880.3	863.0
47.5°	788.1	803.1	827.6	824.8	808.5
50°	738.3	752.6	774.0	768.4	753.7
52.5°	686.7	700.6	720.8	711.8	697.9
55°	634.9	647.7	664.6	655.0	644.2
57.5°	582.6	595.5	608.5	598.8	589.4
60°	529.9	541.2	551.9	542.0	534.8
62.5°	476.3	486.0	495.2	485.7	479.0
65°	422.1	430.7	438.3	429.5	422.4
67.5°	368.2	375.5	382.5	373.4	366.0
70°	314.3	320.6	327.0	317.7	310.8
72.5°	261.1	266.7	272.4	263.3	257.4
75°	209.4	214.2	218.9	210.9	206.2
77.5°	160.1	164.1	167.3	162.3	157.7
80°	114.2	117.2	119.1	117.1	112.9
82.5°	73.4	75.6	76.6	76.5	73.7
85°	39.9	40.6	42.5	43.0	41.5
87.5°	15.4	16.5	16.9	18.2	16.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)