

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: P488644

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-1HI-35-120-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: P488644  
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-35-120-EDD-90  
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

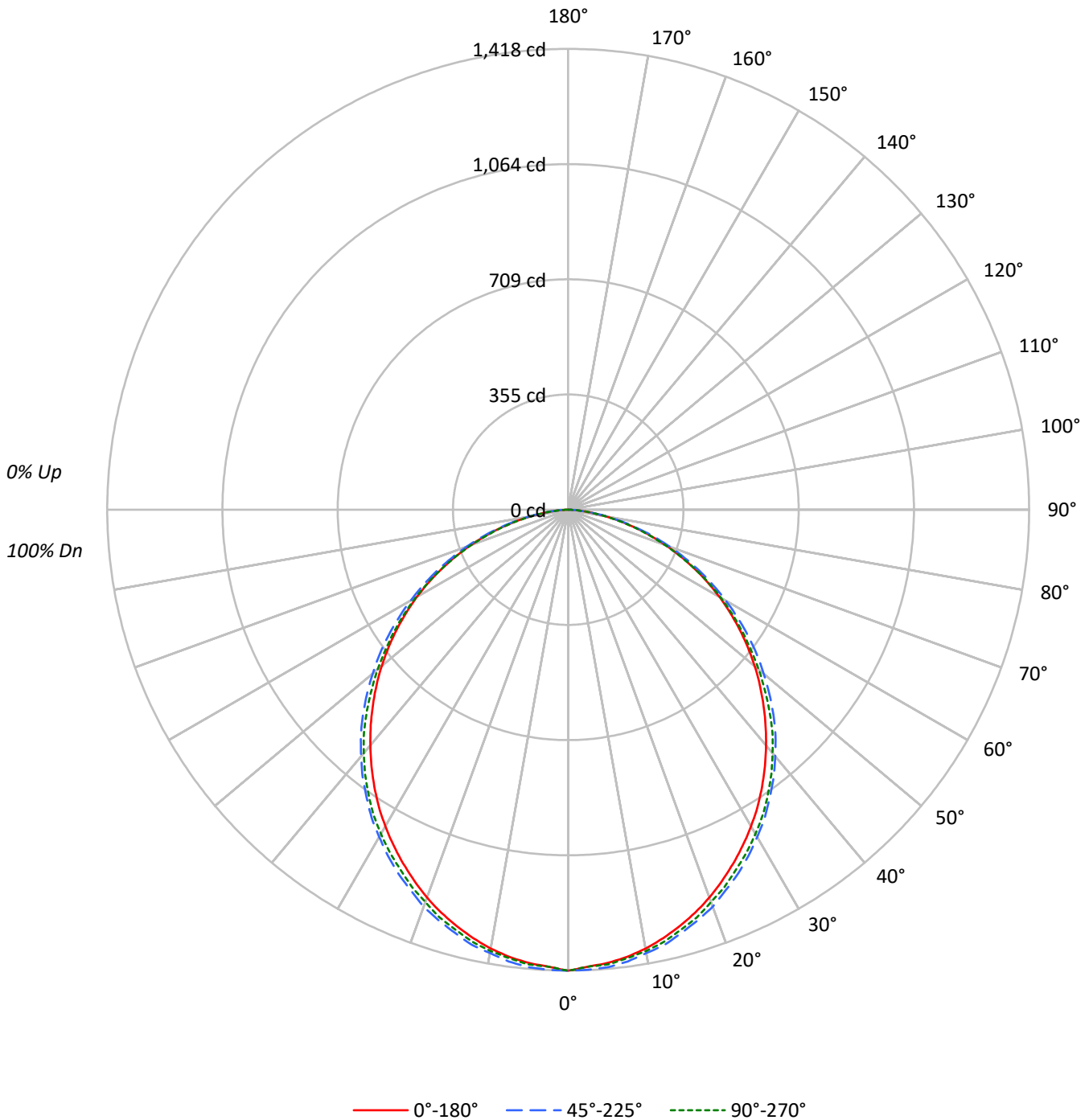
Lumens per Lamp: N/A  
Luminaire Lumens: 3729.1 lumens  
Efficiency: N/A  
Efficacy: 86.3 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 43.2  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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: P488644

CATALOG NUMBER: CLM-12-4-INS-A19156-LD4-1HI-35-120-EDD-90

### Luminous Intensity Polar Plot





TEST NUMBER: P488644

CATALOG NUMBER: CLM-12-4-INS-A19156-LD4-1HI-35-120-EDD-90

**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°	3817	3817	3817
5°	3781	3817	3794
10°	3747	3785	3767
15°	3695	3755	3728
20°	3637	3723	3678
25°	3566	3670	3627
30°	3494	3613	3580
35°	3415	3551	3518
40°	3327	3480	3436
45°	3233	3397	3332
50°	3136	3288	3202
55°	3022	3164	3066
60°	2893	3013	2921
65°	2727	2832	2729
70°	2509	2611	2482
75°	2209	2309	2176
80°	1796	1874	1774
85°	1250	1334	1300



TEST NUMBER: P488644

CATALOG NUMBER: CLM-12-4-INS-A19156-LD4-1HI-35-120-EDD-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	133.6	3.6
10°-20°	378.6	10.2
20°-30°	564.6	15.1
30°-40°	669.1	17.9
40°-50°	677.0	18.2
50°-60°	591.2	15.9
60°-70°	432.1	11.6
70°-80°	229.9	6.2
80°-90°	53.1	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°	1076.7	28.9
0°-40°	1745.8	46.8
0°-60°	3014.0	80.8
0°-90°	3729.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3729.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1418	1418	1418	1418	1418	
5°	1400	1403	1413	1416	1404	133
15°	1326	1335	1348	1356	1338	374
25°	1201	1216	1236	1240	1222	553
35°	1040	1056	1081	1088	1071	650
45°	850	865	892	893	876	655
55°	644	657	674	665	654	576
65°	428	437	445	436	429	424
75°	212	217	222	214	209	226
85°	40	41	43	44	42	51
90°	0	0	0	0	0	



TEST NUMBER: P488644

CATALOG NUMBER: CLM-12-4-INS-A19156-LD4-1HI-35-120-EDD-90

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1418.4	1418.4	1418.4	1418.4	1418.4
2.5°	1407.3	1411.9	1416.6	1418.7	1407.2
5°	1399.9	1402.6	1413.1	1416.3	1404.4
7.5°	1387.8	1391.8	1402.0	1403.5	1392.0
10°	1371.3	1378.4	1385.2	1392.6	1378.5
12.5°	1350.1	1359.7	1371.3	1372.6	1362.0
15°	1326.3	1335.2	1347.8	1355.9	1338.3
17.5°	1299.7	1308.3	1324.6	1326.1	1315.4
20°	1270.0	1280.7	1300.2	1303.6	1284.5
22.5°	1236.3	1250.7	1266.9	1270.2	1256.2
25°	1201.0	1215.8	1235.9	1240.5	1221.7
27.5°	1164.1	1178.3	1200.9	1204.1	1188.3
30°	1124.5	1137.8	1162.6	1168.1	1152.0
32.5°	1084.3	1097.6	1125.1	1129.6	1114.0
35°	1039.7	1055.9	1080.9	1088.4	1070.8
37.5°	994.1	1009.9	1038.3	1045.1	1026.2
40°	947.0	962.7	990.6	996.2	978.0
42.5°	898.8	914.5	944.3	945.2	930.1
45°	849.6	864.7	892.5	893.2	875.6
47.5°	799.7	814.9	839.7	836.9	820.3
50°	749.1	763.6	785.3	779.7	764.8
52.5°	696.8	710.8	731.4	722.2	708.2
55°	644.2	657.2	674.3	664.6	653.6
57.5°	591.1	604.3	617.4	607.5	598.1
60°	537.6	549.2	559.9	549.9	542.7
62.5°	483.2	493.2	502.5	492.9	486.1
65°	428.3	437.0	444.7	435.8	428.6
67.5°	373.6	381.0	388.1	378.9	371.4
70°	318.9	325.3	331.8	322.3	315.4
72.5°	265.0	270.6	276.4	267.2	261.1
75°	212.5	217.4	222.1	214.0	209.3
77.5°	162.4	166.6	169.8	164.6	160.0
80°	115.9	119.0	120.9	118.8	114.5
82.5°	74.5	76.7	77.7	77.6	74.8
85°	40.5	41.2	43.2	43.6	42.1
87.5°	15.7	16.7	17.1	18.5	17.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)