

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: P488670

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-1STD-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: P488670  
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-LD4-1STD-40-120-EDD-90  
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

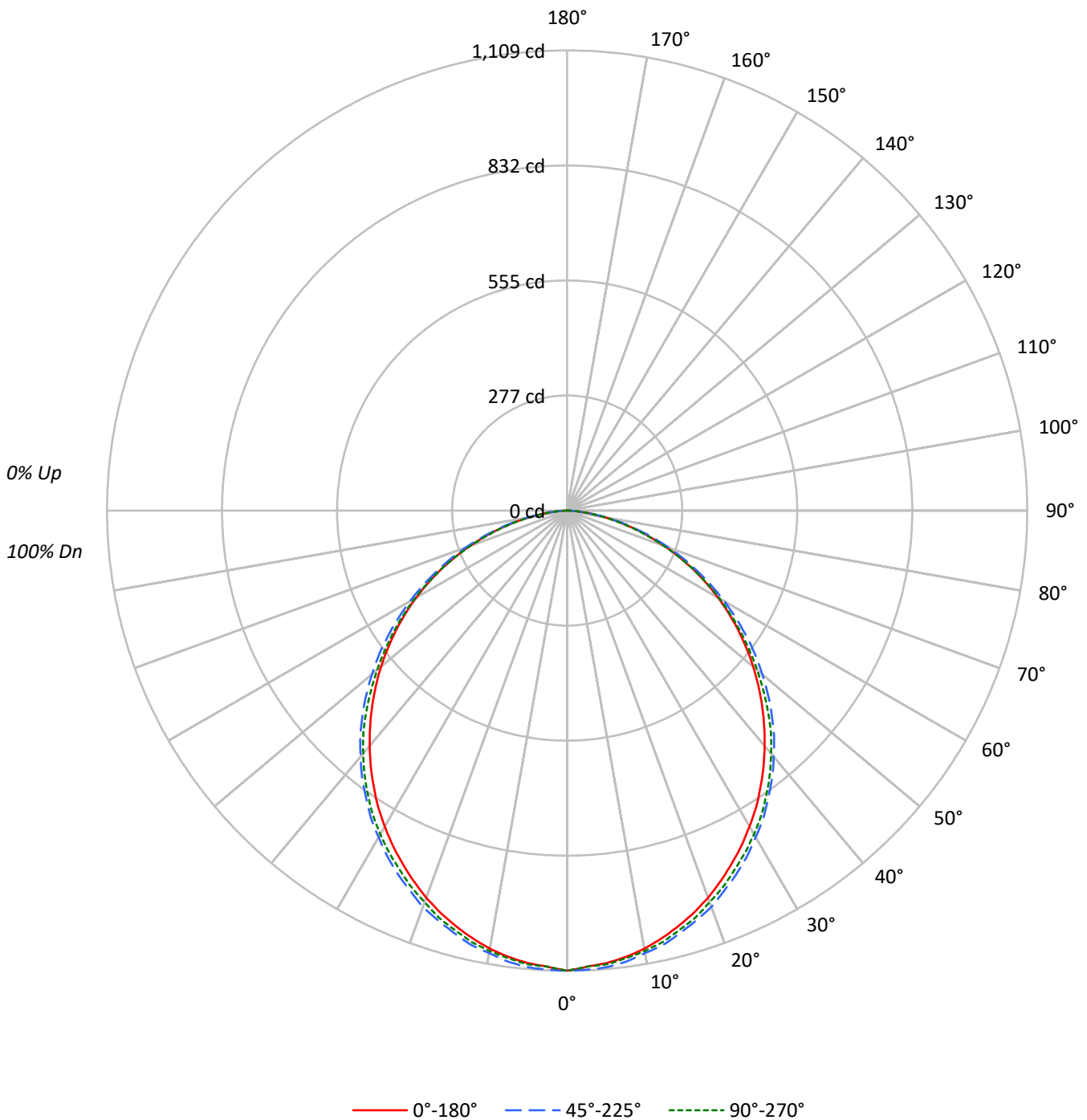
Lumens per Lamp: N/A  
Luminaire Lumens: 2915.3 lumens  
Efficiency: N/A  
Efficacy: 87.5 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 33.3  
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

TEST NUMBER: P488670

CATALOG NUMBER: CLM-12-4-INS-A19156-LD4-1STD-40-120-EDD-90

### Luminous Intensity Polar Plot





TEST NUMBER: P488670

CATALOG NUMBER: CLM-12-4-INS-A19156-LD4-1STD-40-120-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	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°	2984	2984	2984
5°	2956	2984	2966
10°	2929	2959	2945
15°	2889	2936	2915
20°	2843	2911	2876
25°	2788	2869	2836
30°	2732	2824	2798
35°	2670	2776	2750
40°	2601	2720	2686
45°	2528	2655	2605
50°	2452	2570	2503
55°	2363	2473	2397
60°	2262	2356	2283
65°	2132	2213	2133
70°	1961	2041	1939
75°	1727	1805	1701
80°	1404	1464	1387
85°	979	1041	1016



TEST NUMBER: P488670

CATALOG NUMBER: CLM-12-4-INS-A19156-LD4-1STD-40-120-EDD-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	104.4	3.6
10°-20°	295.9	10.2
20°-30°	441.4	15.1
30°-40°	523.0	17.9
40°-50°	529.2	18.2
50°-60°	462.2	15.9
60°-70°	337.8	11.6
70°-80°	179.7	6.2
80°-90°	41.5	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°	841.8	28.9
0°-40°	1364.8	46.8
0°-60°	2356.3	80.8
0°-90°	2915.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2915.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1109	1109	1109	1109	1109	
5°	1094	1096	1105	1107	1098	104
15°	1037	1044	1054	1060	1046	292
25°	939	950	966	970	955	433
35°	813	826	845	851	837	508
45°	664	676	698	698	684	512
55°	504	514	527	520	511	450
65°	335	342	348	341	335	331
75°	166	170	174	167	164	177
85°	32	32	34	34	33	40
90°	0	0	0	0	0	



TEST NUMBER: P488670

CATALOG NUMBER: CLM-12-4-INS-A19156-LD4-1STD-40-120-EDD-90

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1108.9	1108.9	1108.9	1108.9	1108.9
2.5°	1100.2	1103.8	1107.5	1109.1	1100.1
5°	1094.4	1096.5	1104.7	1107.3	1097.9
7.5°	1085.0	1088.1	1096.1	1097.2	1088.2
10°	1072.0	1077.6	1082.9	1088.7	1077.7
12.5°	1055.5	1063.0	1072.0	1073.1	1064.7
15°	1036.9	1043.8	1053.7	1060.0	1046.3
17.5°	1016.1	1022.8	1035.5	1036.7	1028.4
20°	992.9	1001.2	1016.5	1019.1	1004.2
22.5°	966.5	977.7	990.5	993.0	982.0
25°	938.9	950.5	966.2	969.8	955.1
27.5°	910.0	921.1	938.8	941.4	929.0
30°	879.1	889.5	908.9	913.2	900.6
32.5°	847.7	858.1	879.5	883.1	870.9
35°	812.8	825.5	845.0	850.9	837.1
37.5°	777.2	789.5	811.7	817.0	802.3
40°	740.3	752.6	774.4	778.8	764.6
42.5°	702.7	714.9	738.2	738.9	727.2
45°	664.2	676.0	697.7	698.3	684.5
47.5°	625.1	637.0	656.5	654.3	641.3
50°	585.6	597.0	613.9	609.5	597.9
52.5°	544.7	555.7	571.8	564.6	553.6
55°	503.6	513.8	527.2	519.5	511.0
57.5°	462.1	472.4	482.7	475.0	467.6
60°	420.3	429.3	437.8	429.9	424.2
62.5°	377.8	385.5	392.8	385.3	380.0
65°	334.8	341.6	347.6	340.7	335.0
67.5°	292.1	297.8	303.4	296.2	290.3
70°	249.3	254.3	259.4	252.0	246.5
72.5°	207.1	211.5	216.0	208.9	204.1
75°	166.1	169.9	173.6	167.3	163.6
77.5°	127.0	130.2	132.7	128.7	125.1
80°	90.6	93.0	94.5	92.9	89.5
82.5°	58.2	60.0	60.8	60.7	58.5
85°	31.7	32.2	33.7	34.1	32.9
87.5°	12.2	13.1	13.4	14.4	13.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)