

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: P488639

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-1HI-20-120-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: P488639  
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-20-120-EDD  
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

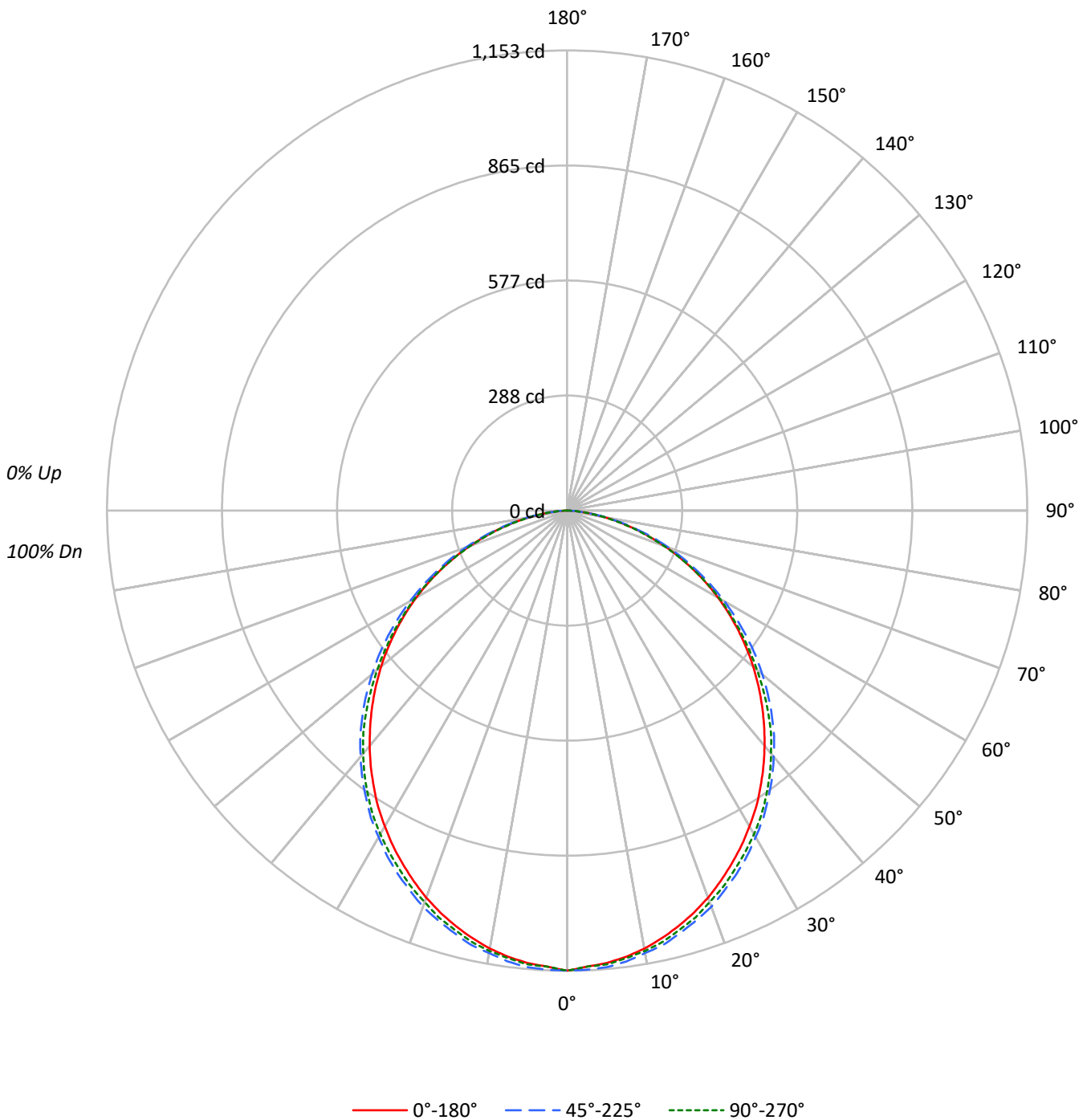
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3030.5 lumens  
Efficiency: N/A  
Efficacy: 70.2 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

TEST NUMBER: P488639

CATALOG NUMBER: CLM-12-4-INS-A19156-LD4-1HI-20-120-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P488639

CATALOG NUMBER: CLM-12-4-INS-A19156-LD4-1HI-20-120-EDD

**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°	3102	3102	3102
5°	3073	3102	3083
10°	3045	3076	3061
15°	3003	3051	3030
20°	2956	3026	2989
25°	2898	2982	2948
30°	2839	2936	2909
35°	2776	2886	2859
40°	2703	2828	2792
45°	2627	2760	2708
50°	2549	2672	2602
55°	2456	2571	2492
60°	2351	2449	2373
65°	2216	2301	2218
70°	2039	2121	2017
75°	1796	1877	1769
80°	1460	1522	1443
85°	1016	1084	1056



TEST NUMBER: P488639

CATALOG NUMBER: CLM-12-4-INS-A19156-LD4-1HI-20-120-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	108.6	3.6
10°-20°	307.6	10.2
20°-30°	458.8	15.1
30°-40°	543.7	17.9
40°-50°	550.2	18.2
50°-60°	480.5	15.9
60°-70°	351.1	11.6
70°-80°	186.8	6.2
80°-90°	43.2	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°	875.0	28.9
0°-40°	1418.7	46.8
0°-60°	2449.4	80.8
0°-90°	3030.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3030.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1153	1153	1153	1153	1153	
5°	1138	1140	1148	1151	1141	108
15°	1078	1085	1095	1102	1088	304
25°	976	988	1004	1008	993	450
35°	845	858	878	884	870	528
45°	690	703	725	726	712	533
55°	524	534	548	540	531	468
65°	348	355	361	354	348	344
75°	173	177	180	174	170	184
85°	33	34	35	35	34	42
90°	0	0	0	0	0	



TEST NUMBER: P488639

CATALOG NUMBER: CLM-12-4-INS-A19156-LD4-1HI-20-120-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1152.7	1152.7	1152.7	1152.7	1152.7
2.5°	1143.7	1147.4	1151.3	1152.9	1143.6
5°	1137.7	1139.8	1148.4	1151.0	1141.3
7.5°	1127.8	1131.1	1139.4	1140.6	1131.2
10°	1114.4	1120.1	1125.7	1131.7	1120.3
12.5°	1097.2	1105.0	1114.4	1115.5	1106.8
15°	1077.9	1085.1	1095.3	1101.9	1087.6
17.5°	1056.3	1063.2	1076.4	1077.6	1069.0
20°	1032.1	1040.8	1056.6	1059.4	1043.9
22.5°	1004.7	1016.4	1029.6	1032.2	1020.8
25°	976.0	988.0	1004.4	1008.1	992.8
27.5°	946.0	957.5	975.9	978.6	965.7
30°	913.8	924.6	944.8	949.2	936.2
32.5°	881.2	892.0	914.3	918.0	905.3
35°	844.9	858.1	878.4	884.5	870.2
37.5°	807.9	820.7	843.8	849.3	834.0
40°	769.6	782.3	805.0	809.6	794.8
42.5°	730.4	743.2	767.4	768.1	755.9
45°	690.4	702.7	725.3	725.9	711.6
47.5°	649.8	662.2	682.4	680.1	666.7
50°	608.8	620.5	638.2	633.6	621.5
52.5°	566.3	577.7	594.4	586.9	575.5
55°	523.5	534.1	548.0	540.1	531.2
57.5°	480.4	491.1	501.8	493.7	486.0
60°	436.9	446.3	455.0	446.9	441.0
62.5°	392.7	400.8	408.3	400.5	395.0
65°	348.0	355.1	361.4	354.2	348.3
67.5°	303.6	309.6	315.4	307.9	301.8
70°	259.2	264.3	269.6	261.9	256.3
72.5°	215.3	219.9	224.6	217.1	212.2
75°	172.7	176.7	180.5	173.9	170.1
77.5°	132.0	135.3	138.0	133.8	130.1
80°	94.2	96.7	98.2	96.6	93.1
82.5°	60.5	62.3	63.2	63.1	60.8
85°	32.9	33.5	35.1	35.4	34.2
87.5°	12.7	13.6	13.9	15.0	13.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)