

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: P488686

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-2LO-20-120-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: P488686  
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-20-120-EDD-90  
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

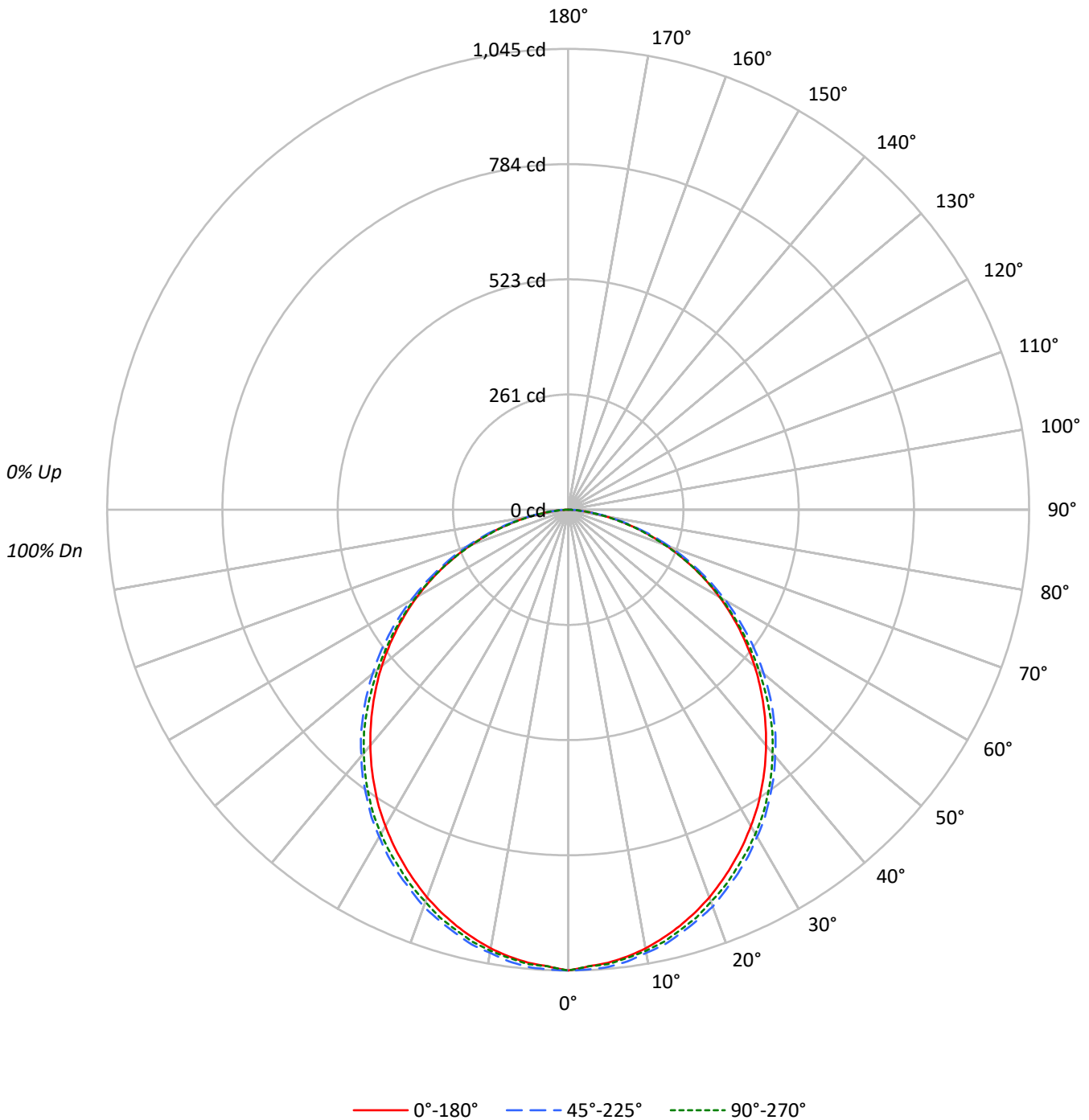
Lumens per Lamp: N/A  
Luminaire Lumens: 2747.1 lumens  
Efficiency: N/A  
Efficacy: 58.7 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	2812	2812	2812
5°	2786	2812	2795
10°	2760	2788	2775
15°	2722	2766	2747
20°	2679	2743	2710
25°	2627	2703	2672
30°	2574	2661	2637
35°	2516	2616	2591
40°	2451	2563	2531
45°	2382	2502	2455
50°	2310	2422	2359
55°	2226	2331	2259
60°	2132	2220	2152
65°	2009	2086	2010
70°	1848	1923	1828
75°	1627	1701	1603
80°	1323	1381	1308
85°	920	982	957



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	98.4	3.6
10°-20°	278.9	10.2
20°-30°	415.9	15.1
30°-40°	492.9	17.9
40°-50°	498.7	18.2
50°-60°	435.5	15.9
60°-70°	318.3	11.6
70°-80°	169.3	6.2
80°-90°	39.1	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°	793.2	28.9
0°-40°	1286.1	46.8
0°-60°	2220.3	80.8
0°-90°	2747.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2747.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1045	1045	1045	1045	1045	
5°	1031	1033	1041	1043	1035	98
15°	977	984	993	999	986	275
25°	885	896	910	914	900	408
35°	766	778	796	802	789	479
45°	626	637	657	658	645	483
55°	474	484	497	490	482	424
65°	316	322	328	321	316	312
75°	156	160	164	158	154	166
85°	30	30	32	32	31	38
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1044.9	1044.9	1044.9	1044.9	1044.9
2.5°	1036.7	1040.1	1043.6	1045.1	1036.6
5°	1031.3	1033.3	1041.0	1043.4	1034.6
7.5°	1022.4	1025.3	1032.8	1033.9	1025.4
10°	1010.2	1015.4	1020.4	1025.8	1015.5
12.5°	994.6	1001.7	1010.2	1011.2	1003.3
15°	977.1	983.6	992.9	998.8	985.9
17.5°	957.5	963.8	975.8	976.9	969.0
20°	935.6	943.4	957.8	960.3	946.3
22.5°	910.8	921.3	933.3	935.7	925.4
25°	884.8	895.6	910.4	913.8	900.0
27.5°	857.5	868.0	884.6	887.0	875.4
30°	828.4	838.2	856.5	860.5	848.6
32.5°	798.8	808.6	828.8	832.2	820.6
35°	765.9	777.8	796.2	801.8	788.8
37.5°	732.3	744.0	764.9	769.9	756.0
40°	697.6	709.2	729.7	733.9	720.5
42.5°	662.1	673.7	695.7	696.3	685.2
45°	625.9	637.0	657.4	658.0	645.0
47.5°	589.1	600.3	618.6	616.5	604.3
50°	551.8	562.5	578.5	574.4	563.4
52.5°	513.3	523.6	538.8	532.0	521.7
55°	474.5	484.1	496.8	489.6	481.5
57.5°	435.5	445.2	454.8	447.5	440.6
60°	396.1	404.5	412.5	405.1	399.8
62.5°	356.0	363.3	370.1	363.1	358.1
65°	315.5	321.9	327.6	321.0	315.7
67.5°	275.2	280.7	285.9	279.1	273.6
70°	234.9	239.6	244.4	237.4	232.3
72.5°	195.2	199.3	203.6	196.8	192.4
75°	156.5	160.1	163.6	157.6	154.2
77.5°	119.6	122.7	125.1	121.3	117.9
80°	85.4	87.6	89.1	87.5	84.4
82.5°	54.9	56.5	57.3	57.2	55.1
85°	29.8	30.4	31.8	32.1	31.0
87.5°	11.5	12.3	12.6	13.6	12.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)