

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: P489588

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-1LO-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: P489588  
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-24-4-INS-A19156-LD4-1LO-27-120-EDD-90  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

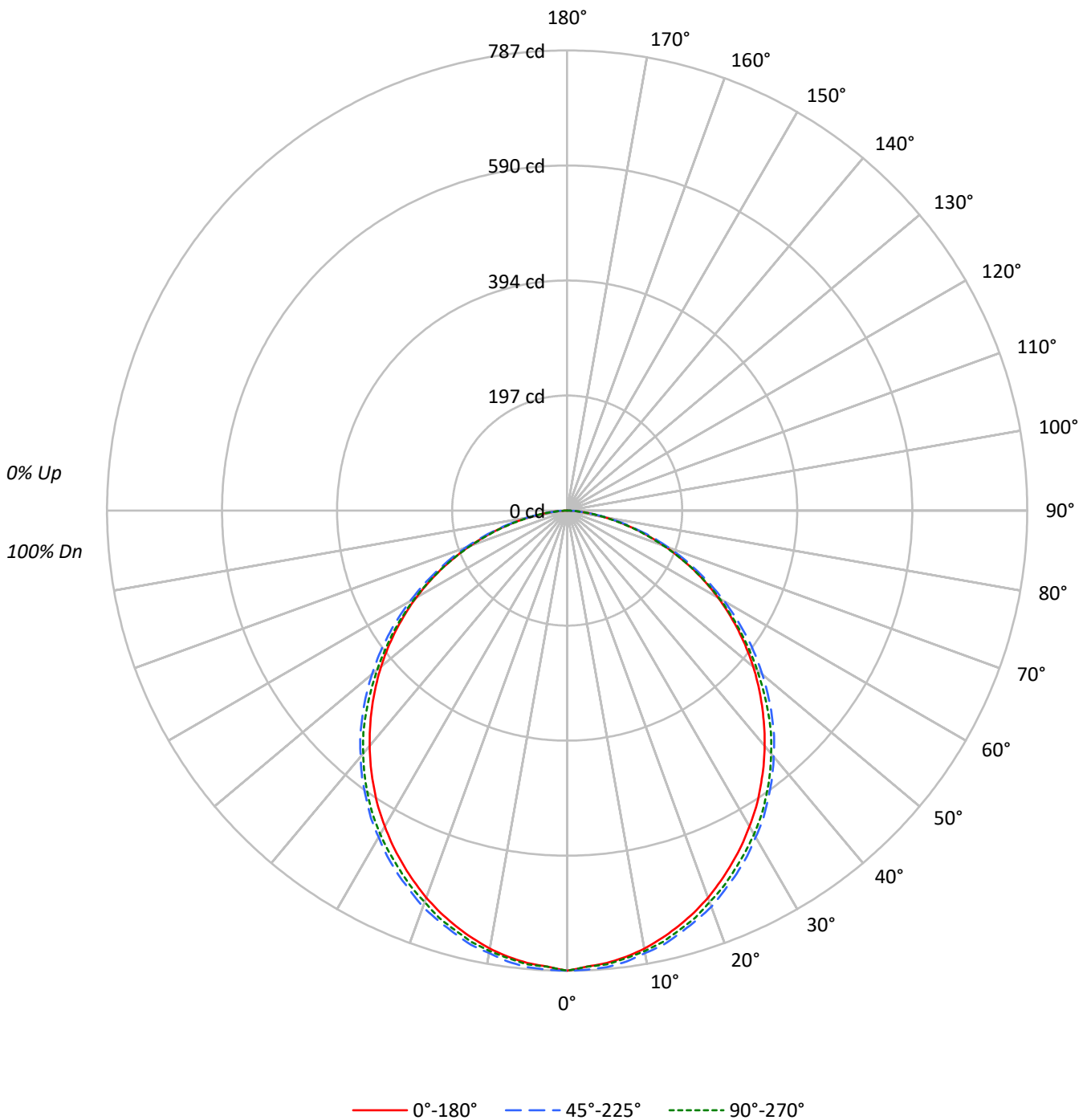
Lumens per Lamp: N/A  
Luminaire Lumens: 2068.8 lumens  
Efficiency: N/A  
Efficacy: 88.4 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.4  
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°	1059	1059	1059
5°	1049	1059	1052
10°	1039	1050	1045
15°	1025	1042	1034
20°	1009	1033	1020
25°	989	1018	1006
30°	969	1002	993
35°	947	985	976
40°	923	965	953
45°	897	942	924
50°	870	912	888
55°	838	878	851
60°	803	836	810
65°	756	785	757
70°	696	724	688
75°	613	640	604
80°	498	520	492
85°	347	369	361



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	74.1	3.6
10°-20°	210.0	10.2
20°-30°	313.2	15.1
30°-40°	371.2	17.9
40°-50°	375.6	18.2
50°-60°	328.0	15.9
60°-70°	239.7	11.6
70°-80°	127.5	6.2
80°-90°	29.5	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°	597.3	28.9
0°-40°	968.5	46.8
0°-60°	1672.1	80.8
0°-90°	2068.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2068.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	787	787	787	787	787	
5°	777	778	784	786	779	74
15°	736	741	748	752	742	207
25°	666	674	686	688	678	307
35°	577	586	600	604	594	361
45°	471	480	495	496	486	364
55°	357	365	374	369	363	319
65°	238	242	247	242	238	235
75°	118	121	123	119	116	125
85°	22	23	24	24	23	28
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	786.9	786.9	786.9	786.9	786.9
2.5°	780.7	783.3	785.9	787.1	780.7
5°	776.6	778.1	783.9	785.8	779.1
7.5°	769.9	772.1	777.8	778.6	772.2
10°	760.7	764.7	768.5	772.6	764.8
12.5°	749.0	754.3	760.7	761.5	755.6
15°	735.8	740.7	747.7	752.2	742.5
17.5°	721.1	725.8	734.8	735.7	729.8
20°	704.6	710.5	721.3	723.2	712.6
22.5°	685.9	693.8	702.9	704.7	696.9
25°	666.3	674.5	685.6	688.2	677.8
27.5°	645.8	653.7	666.2	668.0	659.2
30°	623.8	631.2	645.0	648.0	639.1
32.5°	601.5	608.9	624.2	626.7	618.0
35°	576.8	585.8	599.6	603.8	594.1
37.5°	551.5	560.3	576.0	579.8	569.3
40°	525.4	534.1	549.5	552.7	542.6
42.5°	498.6	507.3	523.9	524.4	516.0
45°	471.3	479.7	495.1	495.5	485.8
47.5°	443.6	452.1	465.8	464.3	455.1
50°	415.6	423.6	435.7	432.6	424.3
52.5°	386.6	394.4	405.7	400.7	392.9
55°	357.4	364.6	374.1	368.7	362.6
57.5°	327.9	335.2	342.5	337.0	331.8
60°	298.3	304.7	310.6	305.1	301.1
62.5°	268.1	273.6	278.8	273.4	269.7
65°	237.6	242.4	246.7	241.8	237.8
67.5°	207.3	211.4	215.3	210.2	206.0
70°	176.9	180.5	184.1	178.8	175.0
72.5°	147.0	150.1	153.3	148.2	144.9
75°	117.9	120.6	123.2	118.7	116.1
77.5°	90.1	92.4	94.2	91.3	88.8
80°	64.3	66.0	67.1	65.9	63.5
82.5°	41.3	42.6	43.1	43.0	41.5
85°	22.5	22.9	23.9	24.2	23.4
87.5°	8.7	9.3	9.5	10.2	9.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)