

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: P489589

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-1LO-27-120-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: P489589  
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  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

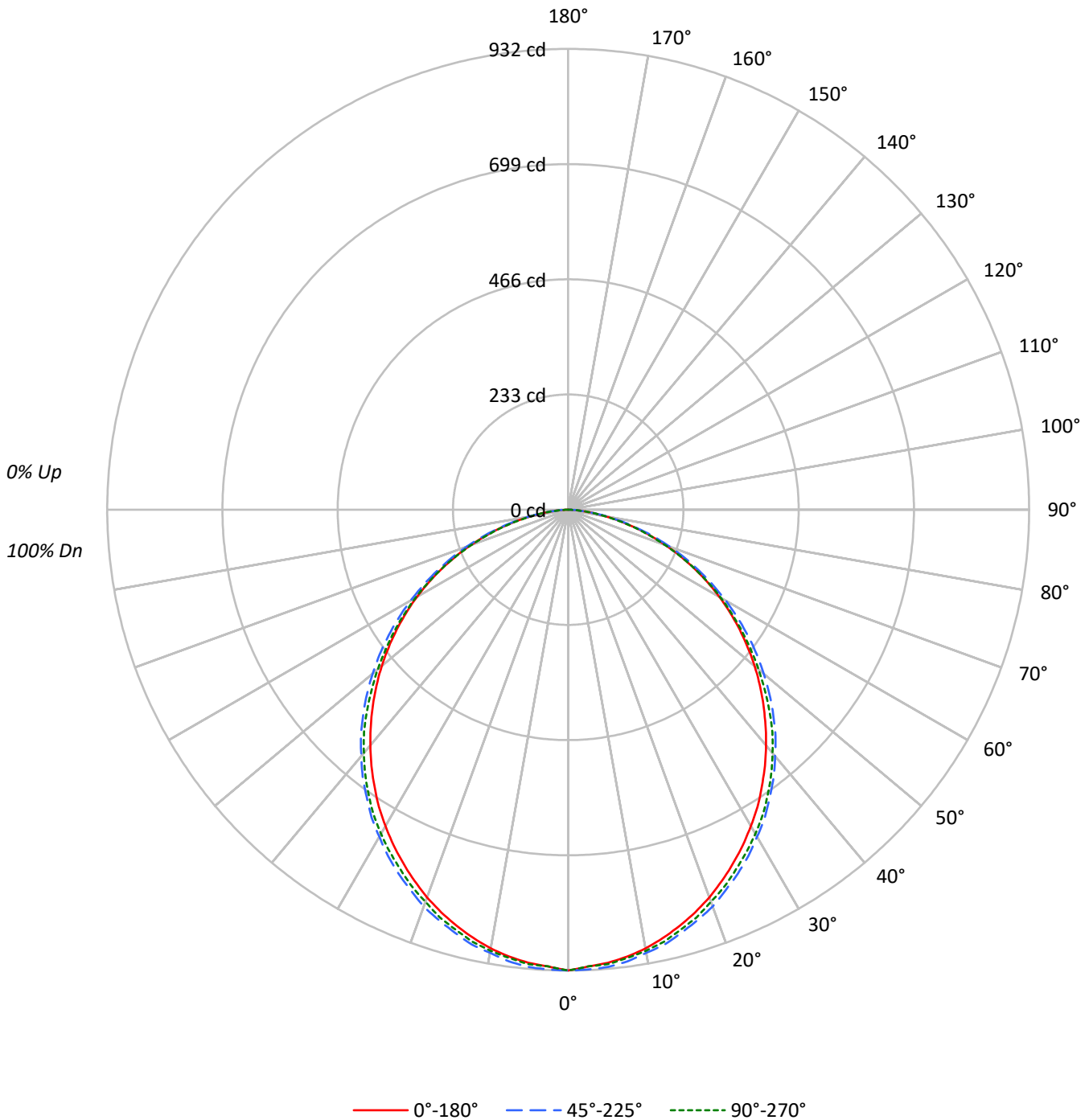
Lumens per Lamp: N/A  
Luminaire Lumens: 2450.0 lumens  
Efficiency: N/A  
Efficacy: 104.7 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

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°	1254	1254	1254
5°	1242	1254	1246
10°	1231	1243	1237
15°	1214	1233	1225
20°	1195	1223	1208
25°	1171	1205	1192
30°	1148	1187	1176
35°	1122	1166	1156
40°	1093	1143	1129
45°	1062	1116	1095
50°	1030	1080	1052
55°	993	1039	1007
60°	950	990	959
65°	896	930	897
70°	824	858	815
75°	726	758	715
80°	590	615	583
85°	411	438	428



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	87.8	3.6
10°-20°	248.7	10.2
20°-30°	370.9	15.1
30°-40°	439.6	17.9
40°-50°	444.8	18.2
50°-60°	388.4	15.9
60°-70°	283.9	11.6
70°-80°	151.0	6.2
80°-90°	34.9	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°	707.4	28.9
0°-40°	1147.0	46.8
0°-60°	1980.2	80.8
0°-90°	2450.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2450.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	932	932	932	932	932	
5°	920	922	928	930	923	87
15°	871	877	886	891	879	246
25°	789	799	812	815	803	364
35°	683	694	710	715	704	427
45°	558	568	586	587	575	431
55°	423	432	443	437	429	378
65°	281	287	292	286	282	278
75°	140	143	146	141	138	148
85°	27	27	28	29	28	34
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	931.9	931.9	931.9	931.9	931.9
2.5°	924.6	927.6	930.7	932.1	924.5
5°	919.8	921.5	928.4	930.5	922.7
7.5°	911.8	914.4	921.1	922.1	914.5
10°	900.9	905.6	910.0	914.9	905.7
12.5°	887.0	893.3	900.9	901.8	894.8
15°	871.4	877.2	885.5	890.8	879.3
17.5°	853.9	859.6	870.2	871.2	864.2
20°	834.4	841.4	854.2	856.5	843.9
22.5°	812.3	821.7	832.4	834.5	825.3
25°	789.1	798.8	812.0	815.0	802.7
27.5°	764.8	774.1	789.0	791.1	780.7
30°	738.8	747.5	763.8	767.4	756.8
32.5°	712.4	721.1	739.2	742.2	731.9
35°	683.0	693.7	710.1	715.1	703.5
37.5°	653.1	663.5	682.2	686.6	674.2
40°	622.2	632.5	650.8	654.5	642.6
42.5°	590.5	600.8	620.4	621.0	611.1
45°	558.2	568.1	586.3	586.8	575.3
47.5°	525.4	535.4	551.7	549.8	539.0
50°	492.2	501.7	515.9	512.3	502.5
52.5°	457.8	467.0	480.5	474.5	465.3
55°	423.2	431.8	443.0	436.6	429.4
57.5°	388.4	397.0	405.7	399.1	392.9
60°	353.2	360.8	367.9	361.3	356.5
62.5°	317.5	324.0	330.1	323.8	319.3
65°	281.4	287.1	292.2	286.3	281.6
67.5°	245.4	250.3	255.0	248.9	244.0
70°	209.5	213.7	218.0	211.8	207.2
72.5°	174.1	177.8	181.6	175.5	171.6
75°	139.6	142.8	145.9	140.6	137.5
77.5°	106.7	109.4	111.6	108.2	105.2
80°	76.1	78.2	79.4	78.1	75.2
82.5°	48.9	50.4	51.1	51.0	49.1
85°	26.6	27.1	28.4	28.6	27.7
87.5°	10.3	11.0	11.3	12.1	11.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)