

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: P489591

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-1LO-30-120-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: P489591  
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-30-120-EDD  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

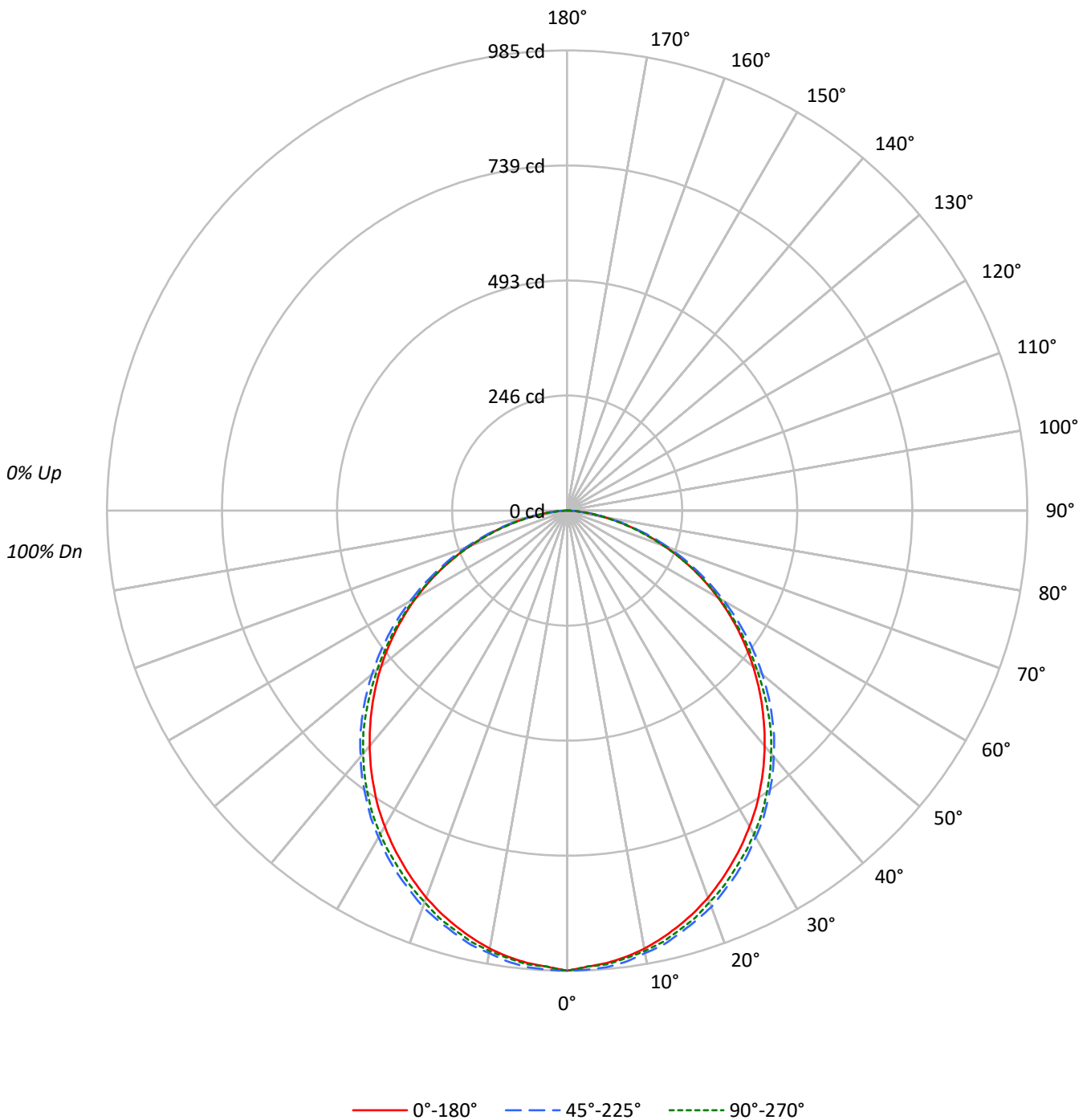
Lumens per Lamp: N/A  
Luminaire Lumens: 2589.3 lumens  
Efficiency: N/A  
Efficacy: 110.7 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

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°	1325	1325	1325
5°	1313	1325	1317
10°	1301	1314	1308
15°	1283	1304	1294
20°	1263	1293	1277
25°	1238	1274	1259
30°	1213	1254	1243
35°	1186	1233	1221
40°	1155	1208	1193
45°	1122	1179	1157
50°	1089	1141	1111
55°	1049	1098	1065
60°	1005	1046	1014
65°	947	983	947
70°	871	906	862
75°	767	802	755
80°	623	650	616
85°	434	463	451



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	92.8	3.6
10°-20°	262.8	10.2
20°-30°	392.0	15.1
30°-40°	464.6	17.9
40°-50°	470.1	18.2
50°-60°	410.5	15.9
60°-70°	300.0	11.6
70°-80°	159.6	6.2
80°-90°	36.9	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°	747.6	28.9
0°-40°	1212.2	46.8
0°-60°	2092.8	80.8
0°-90°	2589.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2589.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	985	985	985	985	985	
5°	972	974	981	983	975	92
15°	921	927	936	942	929	260
25°	834	844	858	861	848	384
35°	722	733	750	756	744	451
45°	590	600	620	620	608	455
55°	447	456	468	461	454	400
65°	297	303	309	303	298	294
75°	148	151	154	149	145	157
85°	28	29	30	30	29	36
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	984.9	984.9	984.9	984.9	984.9
2.5°	977.2	980.4	983.6	985.1	977.1
5°	972.1	973.9	981.2	983.4	975.1
7.5°	963.6	966.4	973.5	974.5	966.5
10°	952.1	957.1	961.8	966.9	957.2
12.5°	937.5	944.1	952.1	953.1	945.7
15°	920.9	927.1	935.8	941.5	929.3
17.5°	902.5	908.4	919.7	920.7	913.4
20°	881.9	889.2	902.8	905.1	891.9
22.5°	858.5	868.4	879.7	882.0	872.2
25°	833.9	844.2	858.2	861.3	848.3
27.5°	808.3	818.1	833.8	836.1	825.1
30°	780.8	790.0	807.3	811.1	799.9
32.5°	752.9	762.1	781.2	784.4	773.5
35°	721.9	733.2	750.5	755.7	743.5
37.5°	690.3	701.3	721.0	725.7	712.5
40°	657.5	668.4	687.8	691.7	679.1
42.5°	624.1	635.0	655.7	656.3	645.8
45°	589.9	600.4	619.7	620.2	608.0
47.5°	555.2	565.8	583.0	581.1	569.6
50°	520.1	530.2	545.3	541.4	531.0
52.5°	483.8	493.6	507.8	501.5	491.7
55°	447.3	456.3	468.2	461.4	453.9
57.5°	410.5	419.6	428.7	421.8	415.3
60°	373.3	381.3	388.8	381.8	376.8
62.5°	335.5	342.4	348.9	342.2	337.5
65°	297.4	303.4	308.8	302.6	297.6
67.5°	259.4	264.5	269.5	263.1	257.9
70°	221.4	225.9	230.4	223.8	219.0
72.5°	184.0	187.9	191.9	185.5	181.3
75°	147.6	150.9	154.2	148.6	145.3
77.5°	112.8	115.6	117.9	114.3	111.1
80°	80.4	82.6	83.9	82.5	79.5
82.5°	51.7	53.3	54.0	53.9	51.9
85°	28.1	28.6	30.0	30.3	29.2
87.5°	10.9	11.6	11.9	12.8	11.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)