

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: P489597

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-1LO-50-120-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: P489597  
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-50-120-EDD  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

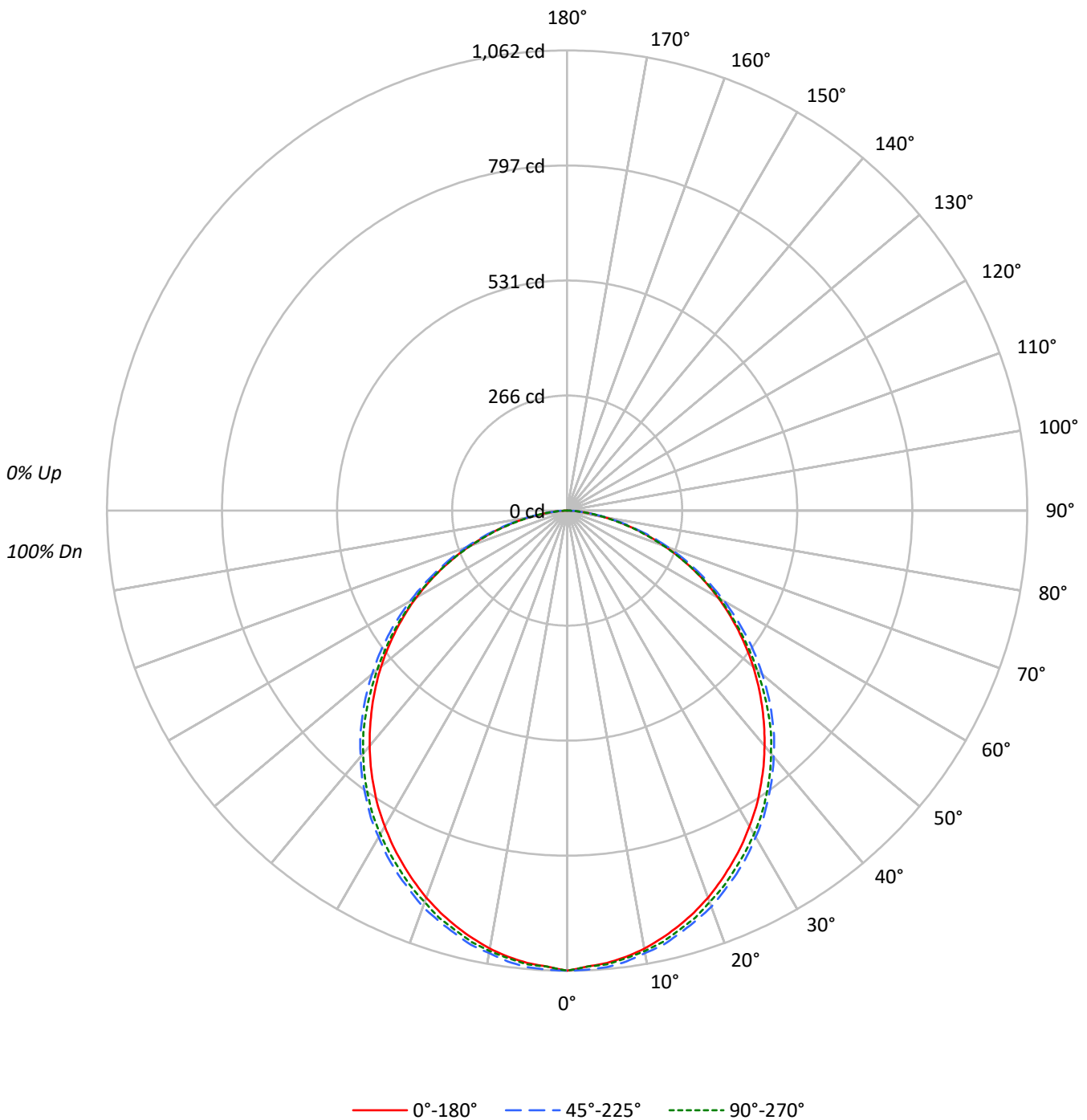
Lumens per Lamp: N/A  
Luminaire Lumens: 2791.5 lumens  
Efficiency: N/A  
Efficacy: 119.3 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

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°	1429	1429	1429
5°	1415	1429	1420
10°	1402	1417	1410
15°	1383	1405	1395
20°	1361	1394	1377
25°	1335	1374	1358
30°	1308	1352	1340
35°	1278	1329	1317
40°	1245	1302	1286
45°	1210	1271	1247
50°	1174	1231	1198
55°	1131	1184	1148
60°	1083	1128	1093
65°	1021	1060	1021
70°	939	977	929
75°	827	865	814
80°	672	701	664
85°	468	499	486



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	100.0	3.6
10°-20°	283.4	10.2
20°-30°	422.6	15.1
30°-40°	500.8	17.9
40°-50°	506.8	18.2
50°-60°	442.6	15.9
60°-70°	323.4	11.6
70°-80°	172.1	6.2
80°-90°	39.8	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°	806.0	28.9
0°-40°	1306.9	46.8
0°-60°	2256.2	80.8
0°-90°	2791.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2791.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1062	1062	1062	1062	1062	
5°	1048	1050	1058	1060	1051	99
15°	993	1000	1009	1015	1002	280
25°	899	910	925	929	914	414
35°	778	790	809	815	802	487
45°	636	647	668	669	656	491
55°	482	492	505	498	489	431
65°	321	327	333	326	321	317
75°	159	163	166	160	157	169
85°	30	31	32	33	32	38
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1061.8	1061.8	1061.8	1061.8	1061.8
2.5°	1053.5	1056.9	1060.5	1062.0	1053.4
5°	1048.0	1050.0	1057.8	1060.2	1051.3
7.5°	1038.9	1041.9	1049.5	1050.6	1042.0
10°	1026.5	1031.8	1036.9	1042.4	1031.9
12.5°	1010.7	1017.9	1026.5	1027.5	1019.5
15°	992.9	999.5	1008.9	1015.0	1001.8
17.5°	973.0	979.4	991.5	992.6	984.7
20°	950.7	958.7	973.3	975.8	961.6
22.5°	925.5	936.2	948.4	950.8	940.3
25°	899.1	910.1	925.2	928.6	914.5
27.5°	871.4	882.0	898.9	901.4	889.5
30°	841.8	851.7	870.3	874.4	862.3
32.5°	811.7	821.6	842.2	845.6	833.9
35°	778.3	790.4	809.1	814.8	801.6
37.5°	744.2	756.0	777.3	782.3	768.2
40°	708.9	720.6	741.5	745.7	732.1
42.5°	672.8	684.6	706.9	707.6	696.3
45°	636.0	647.3	668.1	668.6	655.5
47.5°	598.6	610.0	628.6	626.5	614.1
50°	560.8	571.6	587.9	583.7	572.5
52.5°	521.6	532.1	547.5	540.6	530.1
55°	482.2	492.0	504.8	497.5	489.3
57.5°	442.5	452.3	462.2	454.8	447.7
60°	402.5	411.1	419.2	411.6	406.2
62.5°	361.7	369.2	376.1	368.9	363.8
65°	320.6	327.1	332.9	326.2	320.8
67.5°	279.7	285.2	290.5	283.6	278.0
70°	238.7	243.5	248.4	241.3	236.1
72.5°	198.4	202.6	206.9	200.0	195.5
75°	159.1	162.7	166.3	160.2	156.6
77.5°	121.6	124.7	127.1	123.2	119.8
80°	86.7	89.1	90.5	88.9	85.7
82.5°	55.8	57.4	58.2	58.1	56.0
85°	30.3	30.9	32.3	32.6	31.5
87.5°	11.7	12.5	12.8	13.8	12.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)