

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: P489599

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-1STD-20-120-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: P489599
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-LD4-1STD-20-120-EDD
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

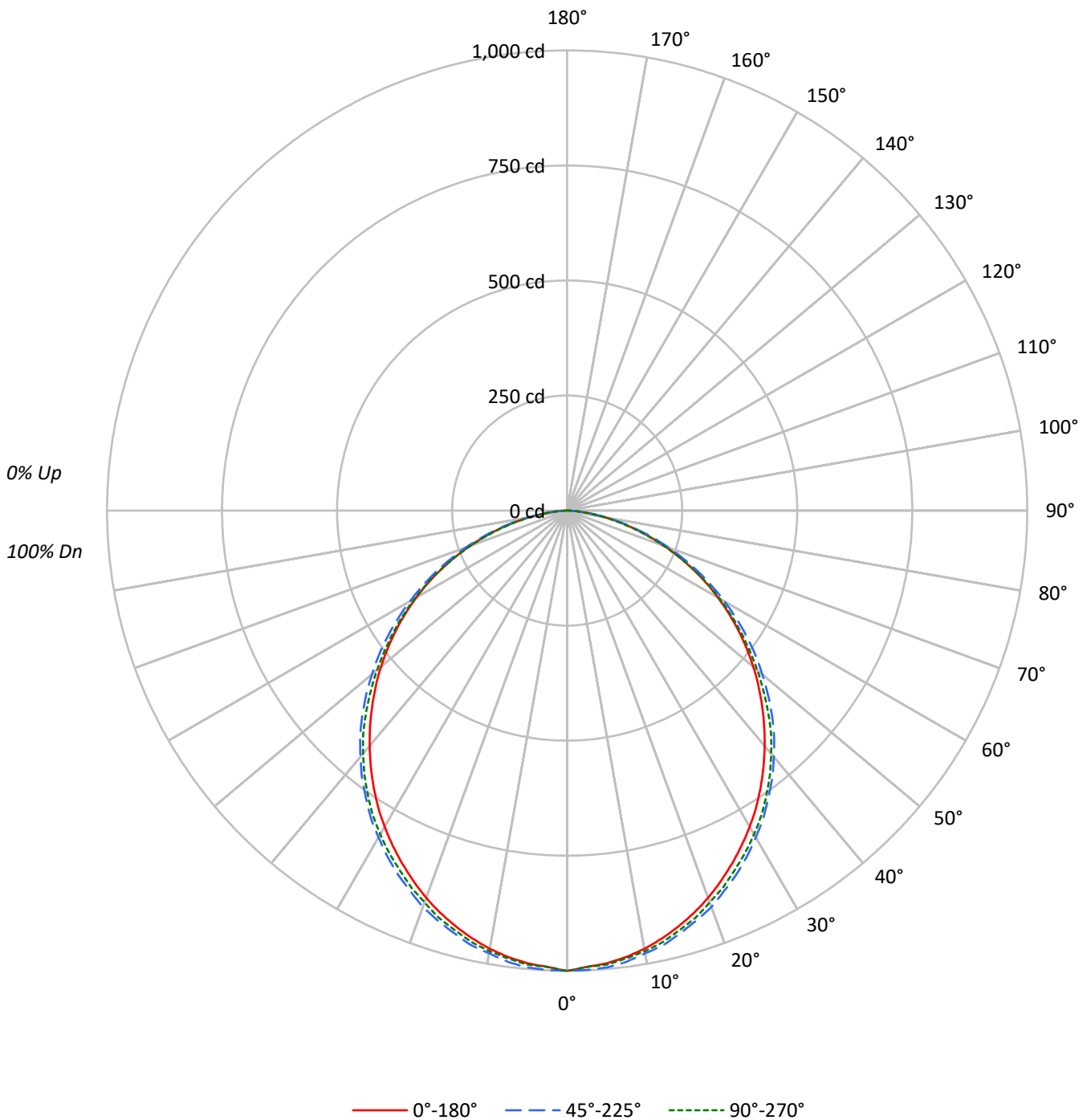
Lumens per Lamp: N/A
Luminaire Lumens: 2629.9 lumens
Efficiency: N/A
Efficacy: 79.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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°	1346	1346	1346
5°	1333	1346	1338
10°	1321	1335	1328
15°	1303	1324	1315
20°	1282	1313	1297
25°	1257	1294	1279
30°	1232	1274	1262
35°	1204	1252	1240
40°	1173	1227	1211
45°	1140	1198	1175
50°	1106	1159	1129
55°	1066	1116	1081
60°	1020	1063	1030
65°	961	998	962
70°	885	921	875
75°	779	814	767
80°	633	661	626
85°	442	469	459



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.2	3.6
10°-20°	267.0	10.2
20°-30°	398.2	15.1
30°-40°	471.9	17.9
40°-50°	477.4	18.2
50°-60°	417.0	15.9
60°-70°	304.7	11.6
70°-80°	162.1	6.2
80°-90°	37.5	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°	759.4	28.9
0°-40°	1231.2	46.8
0°-60°	2125.6	80.8
0°-90°	2629.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2629.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1000	1000	1000	1000	1000	
5°	987	989	997	999	990	94
15°	935	942	950	956	944	264
25°	847	857	872	875	862	390
35°	733	745	762	768	755	459
45°	599	610	629	630	618	462
55°	454	464	476	469	461	406
65°	302	308	314	307	302	299
75°	150	153	157	151	148	159
85°	29	29	30	31	30	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1000.3	1000.3	1000.3	1000.3	1000.3
2.5°	992.5	995.7	999.1	1000.5	992.4
5°	987.3	989.2	996.6	998.9	990.4
7.5°	978.7	981.6	988.8	989.8	981.7
10°	967.1	972.1	976.9	982.1	972.2
12.5°	952.2	958.9	967.1	968.0	960.5
15°	935.4	941.6	950.5	956.2	943.8
17.5°	916.6	922.7	934.1	935.2	927.7
20°	895.7	903.2	916.9	919.3	905.9
22.5°	871.9	882.0	893.5	895.8	885.9
25°	847.0	857.4	871.6	874.8	861.6
27.5°	821.0	831.0	846.9	849.2	838.0
30°	793.0	802.4	819.9	823.8	812.4
32.5°	764.7	774.1	793.4	796.7	785.6
35°	733.2	744.7	762.3	767.6	755.2
37.5°	701.1	712.3	732.3	737.1	723.7
40°	667.9	678.9	698.6	702.6	689.7
42.5°	633.9	644.9	666.0	666.6	656.0
45°	599.2	609.8	629.4	629.9	617.5
47.5°	563.9	574.7	592.2	590.2	578.5
50°	528.3	538.5	553.8	549.9	539.3
52.5°	491.4	501.3	515.8	509.3	499.4
55°	454.3	463.5	475.6	468.7	461.0
57.5°	416.9	426.2	435.4	428.5	421.8
60°	379.2	387.3	394.9	387.8	382.7
62.5°	340.8	347.8	354.4	347.6	342.8
65°	302.0	308.2	313.6	307.3	302.2
67.5°	263.5	268.7	273.7	267.2	261.9
70°	224.9	229.4	234.0	227.3	222.4
72.5°	186.9	190.8	194.9	188.4	184.2
75°	149.9	153.3	156.6	150.9	147.6
77.5°	114.5	117.5	119.8	116.1	112.9
80°	81.7	83.9	85.3	83.8	80.8
82.5°	52.5	54.1	54.8	54.7	52.7
85°	28.6	29.1	30.4	30.7	29.7
87.5°	11.0	11.8	12.1	13.0	12.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)