

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: P489751

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-5STD-40-120-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: P489751
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-LD4-5STD-40-120-EDD
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

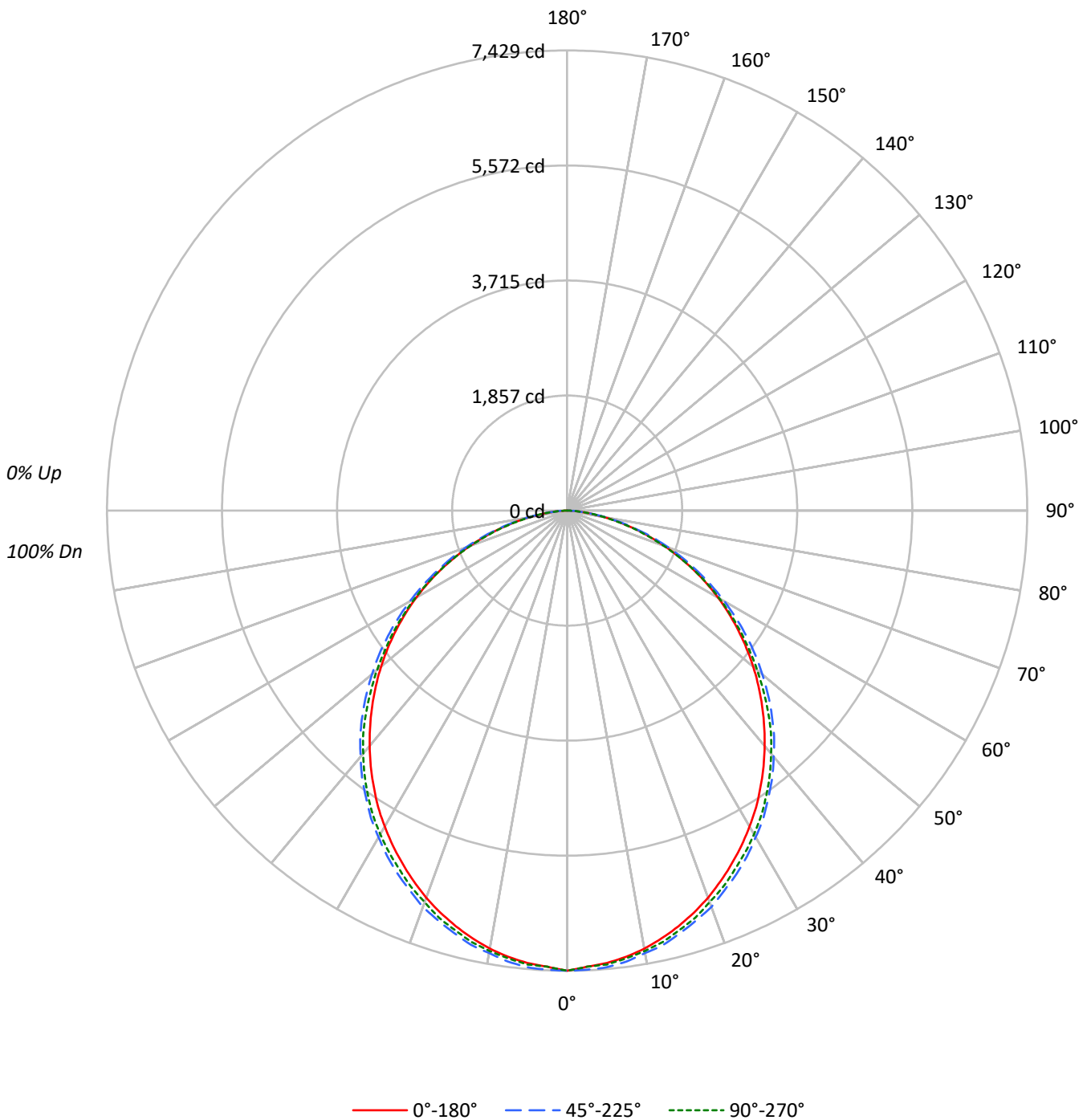
Lumens per Lamp: N/A
Luminaire Lumens: 19531.0 lumens
Efficiency: N/A
Efficacy: 117.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 166.5
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

TEST NUMBER: P489751

CATALOG NUMBER: CLM-24-4-INS-A19156-LD4-5STD-40-120-EDD

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°	9996	9996	9996
5°	9903	9996	9934
10°	9812	9912	9864
15°	9676	9833	9764
20°	9524	9750	9633
25°	9338	9610	9499
30°	9150	9460	9374
35°	8944	9299	9212
40°	8711	9113	8997
45°	8467	8894	8726
50°	8212	8610	8384
55°	7914	8285	8031
60°	7577	7892	7648
65°	7141	7415	7146
70°	6571	6836	6498
75°	5786	6047	5698
80°	4702	4905	4648
85°	3274	3489	3406



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	699.7	3.6
10°-20°	1982.7	10.2
20°-30°	2957.1	15.1
30°-40°	3504.1	17.9
40°-50°	3545.7	18.2
50°-60°	3096.6	15.9
60°-70°	2262.9	11.6
70°-80°	1204.0	6.2
80°-90°	278.3	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
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0°-30°	5639.4	28.9
0°-40°	9143.5	46.8
0°-60°	15785.8	80.8
0°-90°	19531.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	19531.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7429	7429	7429	7429	7429	
5°	7332	7346	7401	7418	7355	695
15°	6947	6993	7059	7102	7009	1958
25°	6290	6368	6473	6497	6399	2898
35°	5445	5530	5661	5700	5608	3405
45°	4450	4529	4674	4678	4586	3433
55°	3374	3442	3532	3481	3423	3016
65°	2243	2289	2329	2282	2245	2220
75°	1113	1139	1163	1121	1096	1183
85°	212	216	226	228	221	269
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7428.9	7428.9	7428.9	7428.9	7428.9
2.5°	7370.8	7394.8	7419.6	7430.4	7370.1
5°	7332.1	7346.1	7401.0	7418.1	7355.4
7.5°	7268.7	7289.6	7343.0	7350.7	7290.4
10°	7182.0	7219.1	7254.7	7293.4	7219.9
12.5°	7071.3	7121.6	7182.0	7189.0	7133.2
15°	6946.7	6993.1	7058.9	7101.5	7009.4
17.5°	6807.4	6852.3	6937.4	6945.1	6889.4
20°	6651.8	6707.5	6809.7	6827.5	6727.6
22.5°	6475.3	6550.4	6635.5	6652.6	6579.0
25°	6290.3	6367.7	6473.0	6497.0	6398.7
27.5°	6096.8	6171.1	6289.6	6306.6	6223.8
30°	5889.4	5959.1	6089.1	6117.7	6033.4
32.5°	5678.9	5748.5	5892.5	5916.5	5834.4
35°	5445.1	5530.3	5661.1	5700.5	5608.4
37.5°	5206.7	5289.5	5438.2	5473.8	5374.7
40°	4959.8	5041.9	5188.2	5217.6	5122.4
42.5°	4707.5	4789.5	4945.9	4950.5	4871.6
45°	4449.8	4528.7	4674.2	4678.1	4586.0
47.5°	4188.1	4267.9	4397.9	4383.2	4296.5
50°	3923.4	3999.3	4113.1	4083.6	4005.5
52.5°	3649.4	3723.0	3830.5	3782.6	3709.0
55°	3373.9	3442.0	3531.8	3480.7	3423.4
57.5°	3096.0	3164.9	3233.8	3181.9	3132.4
60°	2815.8	2876.2	2932.7	2880.1	2842.1
62.5°	2531.0	2582.9	2631.6	2581.3	2545.7
65°	2243.1	2288.7	2329.0	2282.5	2244.6
67.5°	1956.7	1995.4	2032.5	1984.5	1945.1
70°	1670.3	1703.6	1737.6	1688.1	1651.7
72.5°	1387.8	1417.2	1447.4	1399.4	1367.7
75°	1113.0	1138.6	1163.3	1120.8	1096.0
77.5°	850.6	872.3	889.3	862.2	838.2
80°	606.8	623.1	633.1	622.3	599.9
82.5°	390.1	401.7	407.1	406.4	391.6
85°	212.1	215.9	226.0	228.3	220.6
87.5°	82.0	87.5	89.8	96.8	89.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)