

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: P489684

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-4HI-27-120-EDD-90**

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: P489684
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-LD4-4HI-27-120-EDD-90
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

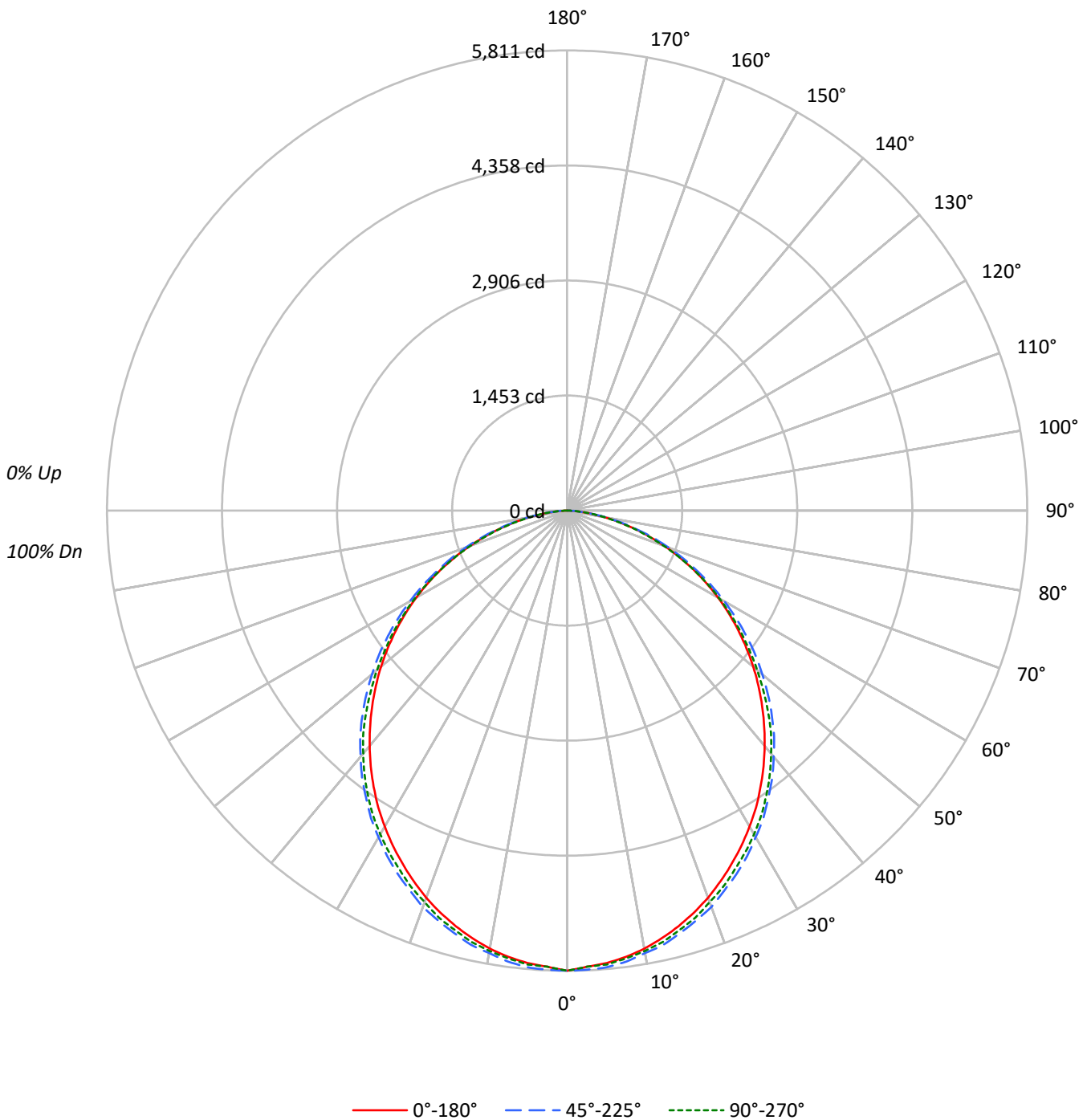
Lumens per Lamp: N/A
Luminaire Lumens: 15277.2 lumens
Efficiency: N/A
Efficacy: 88.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 172.8
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°	7819	7819	7819
5°	7746	7819	7771
10°	7675	7753	7716
15°	7569	7691	7637
20°	7450	7627	7535
25°	7305	7517	7430
30°	7157	7400	7332
35°	6996	7273	7206
40°	6814	7128	7037
45°	6623	6957	6826
50°	6424	6734	6558
55°	6191	6480	6282
60°	5927	6173	5982
65°	5586	5800	5590
70°	5140	5347	5083
75°	4526	4731	4457
80°	3678	3837	3636
85°	2561	2729	2663



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	547.3	3.6
10°-20°	1550.9	10.2
20°-30°	2313.0	15.1
30°-40°	2741.0	17.9
40°-50°	2773.4	18.2
50°-60°	2422.2	15.9
60°-70°	1770.0	11.6
70°-80°	941.8	6.2
80°-90°	217.7	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°	4411.1	28.9
0°-40°	7152.1	46.8
0°-60°	12347.7	80.8
0°-90°	15277.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15277.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5811	5811	5811	5811	5811	
5°	5735	5746	5789	5802	5753	544
15°	5434	5470	5522	5555	5483	1532
25°	4920	4981	5063	5082	5005	2267
35°	4259	4326	4428	4459	4387	2664
45°	3481	3542	3656	3659	3587	2685
55°	2639	2692	2763	2723	2678	2359
65°	1754	1790	1822	1785	1756	1736
75°	871	891	910	877	857	926
85°	166	169	177	179	172	210
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5810.9	5810.9	5810.9	5810.9	5810.9
2.5°	5765.5	5784.3	5803.6	5812.1	5764.9
5°	5735.2	5746.1	5789.1	5802.4	5753.4
7.5°	5685.6	5701.9	5743.7	5749.8	5702.5
10°	5617.8	5646.8	5674.7	5705.0	5647.4
12.5°	5531.2	5570.5	5617.8	5623.2	5579.6
15°	5433.7	5470.0	5521.5	5554.8	5482.8
17.5°	5324.7	5359.9	5426.5	5432.5	5388.9
20°	5203.1	5246.6	5326.6	5340.5	5262.4
22.5°	5065.0	5123.7	5190.3	5203.7	5146.1
25°	4920.3	4980.9	5063.2	5082.0	5005.1
27.5°	4769.0	4827.1	4919.7	4933.0	4868.3
30°	4606.7	4661.2	4762.9	4785.3	4719.3
32.5°	4442.0	4496.5	4609.1	4627.9	4563.7
35°	4259.2	4325.8	4428.1	4459.0	4386.9
37.5°	4072.7	4137.5	4253.7	4281.6	4204.1
40°	3879.6	3943.8	4058.2	4081.2	4006.7
42.5°	3682.2	3746.4	3868.7	3872.3	3810.6
45°	3480.6	3542.4	3656.2	3659.2	3587.2
47.5°	3276.0	3338.3	3440.0	3428.5	3360.7
50°	3068.9	3128.2	3217.2	3194.2	3133.1
52.5°	2854.6	2912.1	2996.3	2958.7	2901.2
55°	2639.1	2692.3	2762.6	2722.6	2677.8
57.5°	2421.7	2475.6	2529.5	2488.9	2450.2
60°	2202.5	2249.8	2294.0	2252.8	2223.1
62.5°	1979.8	2020.3	2058.5	2019.1	1991.3
65°	1754.5	1790.3	1821.7	1785.4	1755.7
67.5°	1530.5	1560.8	1589.9	1552.3	1521.4
70°	1306.5	1332.5	1359.2	1320.4	1292.0
72.5°	1085.5	1108.5	1132.2	1094.6	1069.8
75°	870.6	890.6	910.0	876.7	857.3
77.5°	665.4	682.3	695.6	674.4	655.7
80°	474.7	487.4	495.2	486.8	469.2
82.5°	305.1	314.2	318.5	317.8	306.3
85°	165.9	168.9	176.8	178.6	172.5
87.5°	64.2	68.4	70.2	75.7	69.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)