

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: P489741

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-5LO-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: P489741
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-LD4-5LO-50-120-EDD
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

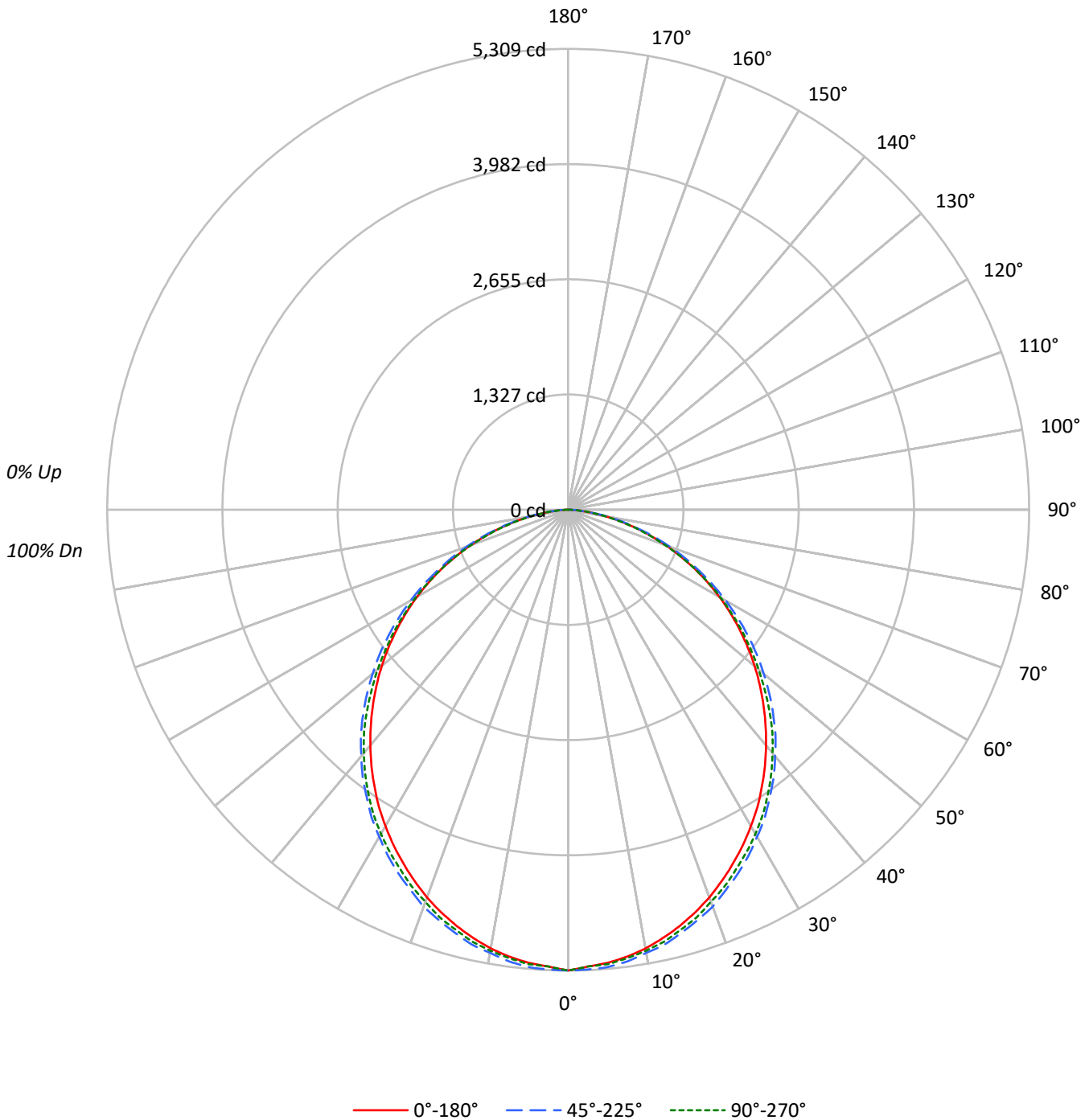
Lumens per Lamp: N/A
Luminaire Lumens: 13957.3 lumens
Efficiency: N/A
Efficacy: 119.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 117
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°	7143	7143	7143
5°	7077	7143	7099
10°	7012	7083	7049
15°	6915	7027	6977
20°	6806	6968	6884
25°	6673	6867	6789
30°	6539	6760	6699
35°	6391	6645	6583
40°	6225	6512	6430
45°	6051	6356	6236
50°	5869	6153	5992
55°	5656	5921	5739
60°	5415	5640	5466
65°	5103	5299	5107
70°	4696	4885	4644
75°	4135	4322	4072
80°	3360	3506	3322
85°	2340	2493	2433



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	500.0	3.6
10°-20°	1416.9	10.2
20°-30°	2113.2	15.1
30°-40°	2504.1	17.9
40°-50°	2533.8	18.2
50°-60°	2212.9	15.9
60°-70°	1617.1	11.6
70°-80°	860.4	6.2
80°-90°	198.9	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°	4030.0	28.9
0°-40°	6534.2	46.8
0°-60°	11280.9	80.8
0°-90°	13957.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13957.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5309	5309	5309	5309	5309	
5°	5240	5250	5289	5301	5256	497
15°	4964	4998	5044	5075	5009	1399
25°	4495	4550	4626	4643	4573	2071
35°	3891	3952	4046	4074	4008	2433
45°	3180	3236	3340	3343	3277	2453
55°	2411	2460	2524	2487	2446	2155
65°	1603	1636	1664	1631	1604	1586
75°	795	814	831	801	783	846
85°	152	154	162	163	158	192
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5308.9	5308.9	5308.9	5308.9	5308.9
2.5°	5267.4	5284.5	5302.2	5310.0	5266.8
5°	5239.7	5249.7	5288.9	5301.1	5256.3
7.5°	5194.4	5209.3	5247.5	5253.0	5209.9
10°	5132.4	5159.0	5184.4	5212.1	5159.5
12.5°	5053.3	5089.3	5132.4	5137.4	5097.6
15°	4964.3	4997.5	5044.5	5074.9	5009.1
17.5°	4864.7	4896.8	4957.6	4963.2	4923.3
20°	4753.5	4793.4	4866.4	4879.1	4807.7
22.5°	4627.4	4681.1	4741.9	4754.1	4701.5
25°	4495.2	4550.5	4625.8	4642.9	4572.7
27.5°	4356.9	4410.0	4494.7	4506.8	4447.7
30°	4208.7	4258.5	4351.4	4371.9	4311.6
32.5°	4058.3	4108.0	4210.9	4228.1	4169.4
35°	3891.2	3952.1	4045.5	4073.7	4007.9
37.5°	3720.8	3780.0	3886.2	3911.7	3840.9
40°	3544.4	3603.0	3707.6	3728.6	3660.6
42.5°	3364.1	3422.7	3534.4	3537.8	3481.3
45°	3179.9	3236.3	3340.3	3343.1	3277.2
47.5°	2992.9	3049.9	3142.8	3132.3	3070.4
50°	2803.8	2858.0	2939.3	2918.3	2862.4
52.5°	2608.0	2660.5	2737.4	2703.1	2650.6
55°	2411.1	2459.7	2523.9	2487.4	2446.5
57.5°	2212.5	2261.7	2310.9	2273.9	2238.5
60°	2012.3	2055.4	2095.8	2058.2	2031.1
62.5°	1808.7	1845.8	1880.6	1844.7	1819.2
65°	1602.9	1635.6	1664.3	1631.2	1604.1
67.5°	1398.3	1425.9	1452.5	1418.2	1390.0
70°	1193.6	1217.4	1241.8	1206.4	1180.4
72.5°	991.7	1012.8	1034.3	1000.0	977.4
75°	795.4	813.6	831.3	800.9	783.2
77.5°	607.9	623.4	635.5	616.2	599.0
80°	433.6	445.3	452.5	444.7	428.7
82.5°	278.8	287.1	290.9	290.4	279.9
85°	151.6	154.3	161.5	163.2	157.6
87.5°	58.6	62.5	64.2	69.1	63.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)