

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: P489690

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-4HI-40-120-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: P489690
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-40-120-EDD-90
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

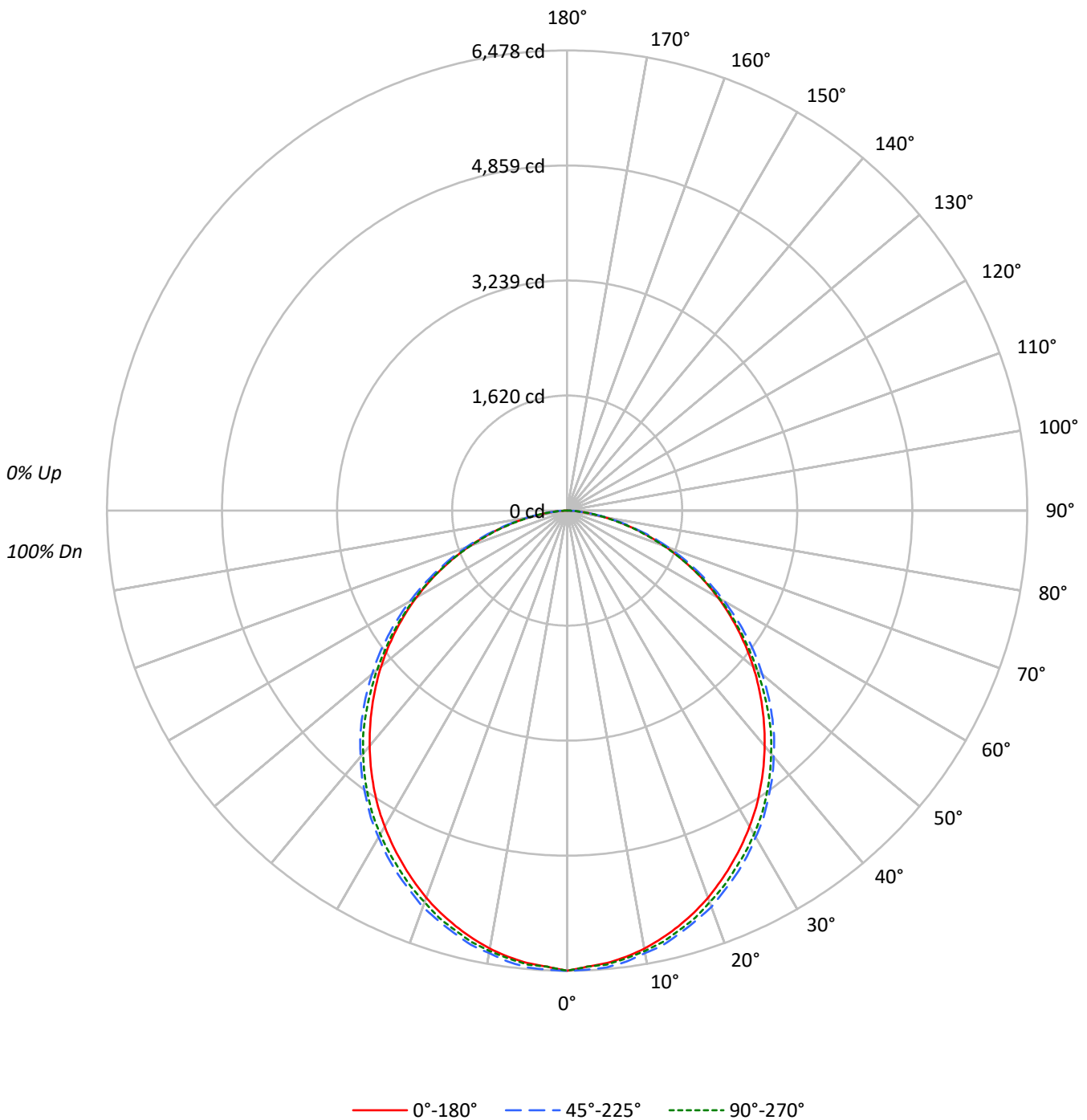
Lumens per Lamp: N/A
Luminaire Lumens: 17031.5 lumens
Efficiency: N/A
Efficacy: 98.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	8716	8716	8716
5°	8636	8717	8663
10°	8557	8643	8602
15°	8438	8574	8514
20°	8305	8503	8400
25°	8143	8380	8284
30°	7979	8250	8174
35°	7799	8109	8033
40°	7597	7946	7846
45°	7383	7756	7610
50°	7161	7508	7311
55°	6902	7225	7003
60°	6608	6882	6669
65°	6227	6466	6232
70°	5730	5961	5666
75°	5046	5274	4968
80°	4100	4278	4053
85°	2854	3043	2970



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	610.1	3.6
10°-20°	1728.9	10.2
20°-30°	2578.6	15.1
30°-40°	3055.7	17.9
40°-50°	3091.9	18.2
50°-60°	2700.3	15.9
60°-70°	1973.3	11.6
70°-80°	1050.0	6.2
80°-90°	242.7	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°	4917.7	28.9
0°-40°	7973.4	46.8
0°-60°	13765.6	80.8
0°-90°	17031.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	17031.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6478	6478	6478	6478	6478	
5°	6394	6406	6454	6469	6414	606
15°	6058	6098	6156	6193	6112	1708
25°	5485	5553	5645	5666	5580	2527
35°	4748	4822	4937	4971	4891	2969
45°	3880	3949	4076	4079	3999	2993
55°	2942	3002	3080	3035	2985	2630
65°	1956	1996	2031	1990	1957	1936
75°	971	993	1014	977	956	1032
85°	185	188	197	199	192	234
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6478.2	6478.2	6478.2	6478.2	6478.2
2.5°	6427.6	6448.5	6470.1	6479.5	6426.9
5°	6393.8	6406.0	6453.9	6468.7	6414.1
7.5°	6338.5	6356.7	6403.3	6410.0	6357.4
10°	6262.9	6295.3	6326.3	6360.1	6295.9
12.5°	6166.3	6210.2	6262.9	6268.9	6220.3
15°	6057.7	6098.2	6155.6	6192.7	6112.4
17.5°	5936.2	5975.3	6049.6	6056.3	6007.7
20°	5800.5	5849.1	5938.2	5953.7	5866.7
22.5°	5646.6	5712.1	5786.4	5801.2	5737.1
25°	5485.3	5552.8	5644.6	5665.5	5579.8
27.5°	5316.6	5381.4	5484.6	5499.5	5427.3
30°	5135.7	5196.4	5309.8	5334.8	5261.2
32.5°	4952.1	5012.9	5138.4	5159.3	5087.8
35°	4748.3	4822.5	4936.6	4971.0	4890.7
37.5°	4540.4	4612.6	4742.2	4773.3	4686.9
40°	4325.1	4396.6	4524.2	4549.8	4466.8
42.5°	4105.0	4176.6	4312.9	4317.0	4248.1
45°	3880.3	3949.1	4076.0	4079.4	3999.1
47.5°	3652.2	3721.7	3835.1	3822.2	3746.7
50°	3421.3	3487.5	3586.7	3561.0	3492.9
52.5°	3182.4	3246.5	3340.3	3298.5	3234.4
55°	2942.1	3001.5	3079.8	3035.3	2985.3
57.5°	2699.8	2759.9	2819.9	2774.7	2731.5
60°	2455.5	2508.1	2557.4	2511.5	2478.4
62.5°	2207.1	2252.3	2294.8	2251.0	2219.9
65°	1956.0	1995.8	2030.9	1990.4	1957.4
67.5°	1706.3	1740.0	1772.4	1730.6	1696.2
70°	1456.5	1485.6	1515.3	1472.1	1440.3
72.5°	1210.2	1235.8	1262.2	1220.3	1192.6
75°	970.6	992.9	1014.5	977.3	955.7
77.5°	741.8	760.7	775.5	751.9	731.0
80°	529.2	543.3	552.1	542.7	523.1
82.5°	340.2	350.3	355.0	354.3	341.5
85°	184.9	188.3	197.1	199.1	192.4
87.5°	71.5	76.3	78.3	84.4	77.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)