

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: P489752

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-5STD-50-120-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: P489752
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-50-120-EDD-90
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

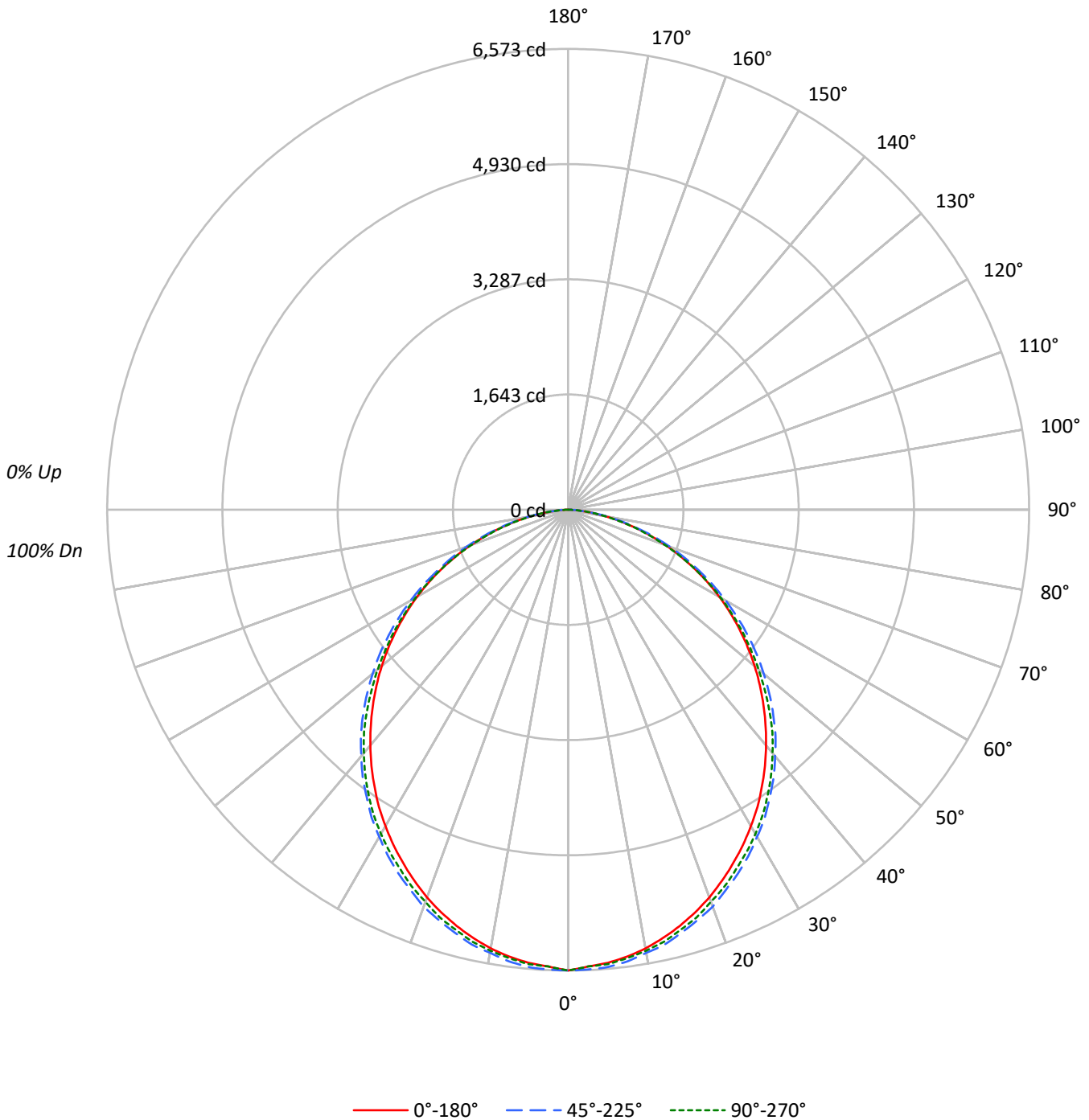
Lumens per Lamp: N/A
Luminaire Lumens: 17280.3 lumens
Efficiency: N/A
Efficacy: 103.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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

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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°	8844	8844	8844
5°	8762	8844	8790
10°	8682	8770	8727
15°	8561	8700	8639
20°	8427	8627	8523
25°	8262	8502	8405
30°	8096	8370	8293
35°	7913	8227	8150
40°	7708	8062	7960
45°	7491	7869	7721
50°	7266	7617	7418
55°	7002	7330	7105
60°	6704	6982	6767
65°	6318	6560	6323
70°	5814	6048	5749
75°	5120	5351	5041
80°	4160	4341	4112
85°	2896	3088	3013



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	619.0	3.6
10°-20°	1754.2	10.2
20°-30°	2616.3	15.1
30°-40°	3100.3	17.9
40°-50°	3137.1	18.2
50°-60°	2739.8	15.9
60°-70°	2002.1	11.6
70°-80°	1065.3	6.2
80°-90°	246.2	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°	4989.5	28.9
0°-40°	8089.9	46.8
0°-60°	13966.7	80.8
0°-90°	17280.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	17280.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6573	6573	6573	6573	6573	
5°	6487	6500	6548	6563	6508	615
15°	6146	6187	6246	6283	6202	1733
25°	5566	5634	5727	5748	5661	2564
35°	4818	4893	5009	5044	4962	3013
45°	3937	4007	4136	4139	4058	3037
55°	2985	3045	3125	3080	3029	2668
65°	1985	2025	2061	2020	1986	1964
75°	985	1007	1029	992	970	1047
85°	188	191	200	202	195	238
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6572.8	6572.8	6572.8	6572.8	6572.8
2.5°	6521.5	6542.7	6564.6	6574.2	6520.8
5°	6487.2	6499.5	6548.2	6563.2	6507.8
7.5°	6431.1	6449.5	6496.8	6503.6	6450.2
10°	6354.4	6387.2	6418.7	6453.0	6387.9
12.5°	6256.4	6300.9	6354.4	6360.5	6311.2
15°	6146.2	6187.3	6245.5	6283.1	6201.6
17.5°	6022.9	6062.6	6138.0	6144.8	6095.5
20°	5885.3	5934.6	6025.0	6040.7	5952.4
22.5°	5729.1	5795.6	5870.9	5885.9	5820.9
25°	5565.5	5633.9	5727.1	5748.3	5661.3
27.5°	5394.3	5460.0	5564.8	5579.8	5506.6
30°	5210.7	5272.4	5387.4	5412.7	5338.1
32.5°	5024.5	5086.1	5213.5	5234.7	5162.1
35°	4817.6	4893.0	5008.7	5043.6	4962.1
37.5°	4606.7	4680.0	4811.5	4843.0	4755.3
40°	4388.3	4460.9	4590.3	4616.3	4532.1
42.5°	4165.0	4237.6	4375.9	4380.0	4310.2
45°	3937.0	4006.8	4135.6	4139.0	4057.5
47.5°	3705.5	3776.0	3891.1	3878.1	3801.4
50°	3471.3	3538.4	3639.1	3613.1	3543.9
52.5°	3228.9	3293.9	3389.1	3346.7	3281.6
55°	2985.1	3045.4	3124.8	3079.6	3028.9
57.5°	2739.2	2800.2	2861.1	2815.3	2771.4
60°	2491.3	2544.8	2594.7	2548.2	2514.6
62.5°	2239.3	2285.2	2328.4	2283.8	2252.3
65°	1984.6	2025.0	2060.6	2019.5	1986.0
67.5°	1731.2	1765.4	1798.3	1755.9	1720.9
70°	1477.8	1507.3	1537.4	1493.6	1461.4
72.5°	1227.9	1253.9	1280.6	1238.1	1210.1
75°	984.8	1007.4	1029.3	991.6	969.7
77.5°	752.6	771.8	786.8	762.9	741.6
80°	536.9	551.3	560.2	550.6	530.7
82.5°	345.1	355.4	360.2	359.5	346.5
85°	187.6	191.1	200.0	202.0	195.2
87.5°	72.6	77.4	79.4	85.6	78.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)