

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: P489743

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-5STD-20-120-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: P489743
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-20-120-EDD
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

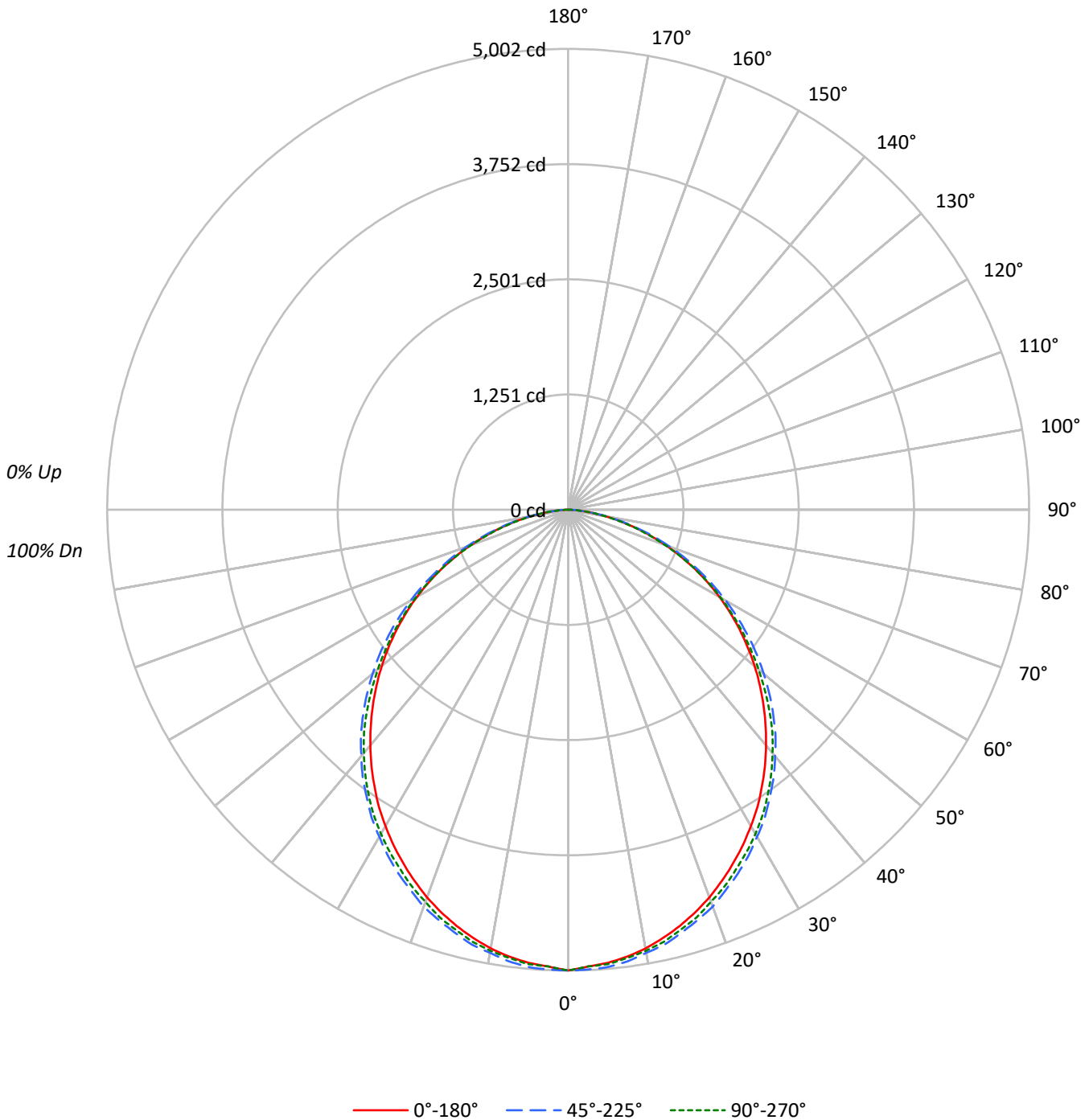
Lumens per Lamp: N/A
Luminaire Lumens: 13149.6 lumens
Efficiency: N/A
Efficacy: 79.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	6730	6730	6730
5°	6667	6730	6688
10°	6606	6673	6641
15°	6515	6620	6574
20°	6412	6565	6486
25°	6287	6470	6396
30°	6160	6369	6311
35°	6022	6260	6202
40°	5865	6135	6057
45°	5701	5988	5875
50°	5529	5797	5645
55°	5328	5578	5407
60°	5102	5313	5149
65°	4808	4992	4811
70°	4424	4602	4375
75°	3896	4072	3836
80°	3166	3303	3130
85°	2205	2350	2293



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	471.1	3.6
10°-20°	1334.9	10.2
20°-30°	1990.9	15.1
30°-40°	2359.2	17.9
40°-50°	2387.2	18.2
50°-60°	2084.9	15.9
60°-70°	1523.5	11.6
70°-80°	810.7	6.2
80°-90°	187.4	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°	3796.8	28.9
0°-40°	6156.0	46.8
0°-60°	10628.1	80.8
0°-90°	13149.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13149.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5002	5002	5002	5002	5002	
5°	4936	4946	4983	4994	4952	468
15°	4677	4708	4752	4781	4719	1319
25°	4235	4287	4358	4374	4308	1951
35°	3666	3723	3811	3838	3776	2293
45°	2996	3049	3147	3150	3088	2311
55°	2272	2317	2378	2343	2305	2031
65°	1510	1541	1568	1537	1511	1494
75°	749	767	783	755	738	797
85°	143	145	152	154	148	181
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5001.6	5001.6	5001.6	5001.6	5001.6
2.5°	4962.6	4978.7	4995.4	5002.7	4962.0
5°	4936.5	4945.9	4982.9	4994.3	4952.1
7.5°	4893.8	4907.8	4943.8	4949.0	4908.4
10°	4835.4	4860.4	4884.4	4910.4	4860.9
12.5°	4760.9	4794.8	4835.4	4840.1	4802.6
15°	4677.0	4708.3	4752.5	4781.2	4719.2
17.5°	4583.2	4613.4	4670.7	4675.9	4638.4
20°	4478.4	4516.0	4584.7	4596.7	4529.5
22.5°	4359.6	4410.2	4467.5	4479.0	4429.5
25°	4235.1	4287.2	4358.1	4374.2	4308.0
27.5°	4104.8	4154.8	4234.6	4246.0	4190.3
30°	3965.1	4012.0	4099.6	4118.9	4062.1
32.5°	3823.4	3870.3	3967.2	3983.4	3928.1
35°	3666.0	3723.4	3811.4	3838.0	3776.0
37.5°	3505.5	3561.3	3661.3	3685.3	3618.6
40°	3339.3	3394.5	3493.0	3512.8	3448.7
42.5°	3169.4	3224.6	3329.9	3333.0	3279.9
45°	2995.9	3049.0	3147.0	3149.6	3087.6
47.5°	2819.7	2873.4	2961.0	2951.1	2892.7
50°	2641.5	2692.6	2769.2	2749.4	2696.8
52.5°	2457.0	2506.6	2579.0	2546.7	2497.2
55°	2271.5	2317.4	2377.8	2343.4	2304.9
57.5°	2084.5	2130.8	2177.2	2142.3	2108.9
60°	1895.8	1936.5	1974.5	1939.1	1913.5
62.5°	1704.0	1739.0	1771.8	1737.9	1713.9
65°	1510.2	1540.9	1568.0	1536.8	1511.2
67.5°	1317.4	1343.4	1368.4	1336.1	1309.6
70°	1124.6	1147.0	1169.9	1136.5	1112.1
72.5°	934.4	954.2	974.5	942.2	920.8
75°	749.4	766.6	783.2	754.6	737.9
77.5°	572.7	587.3	598.8	580.5	564.4
80°	408.6	419.5	426.3	419.0	403.9
82.5°	262.6	270.5	274.1	273.6	263.7
85°	142.8	145.4	152.2	153.7	148.5
87.5°	55.2	58.9	60.4	65.1	59.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)