

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: P489753

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-5STD-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: P489753
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
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

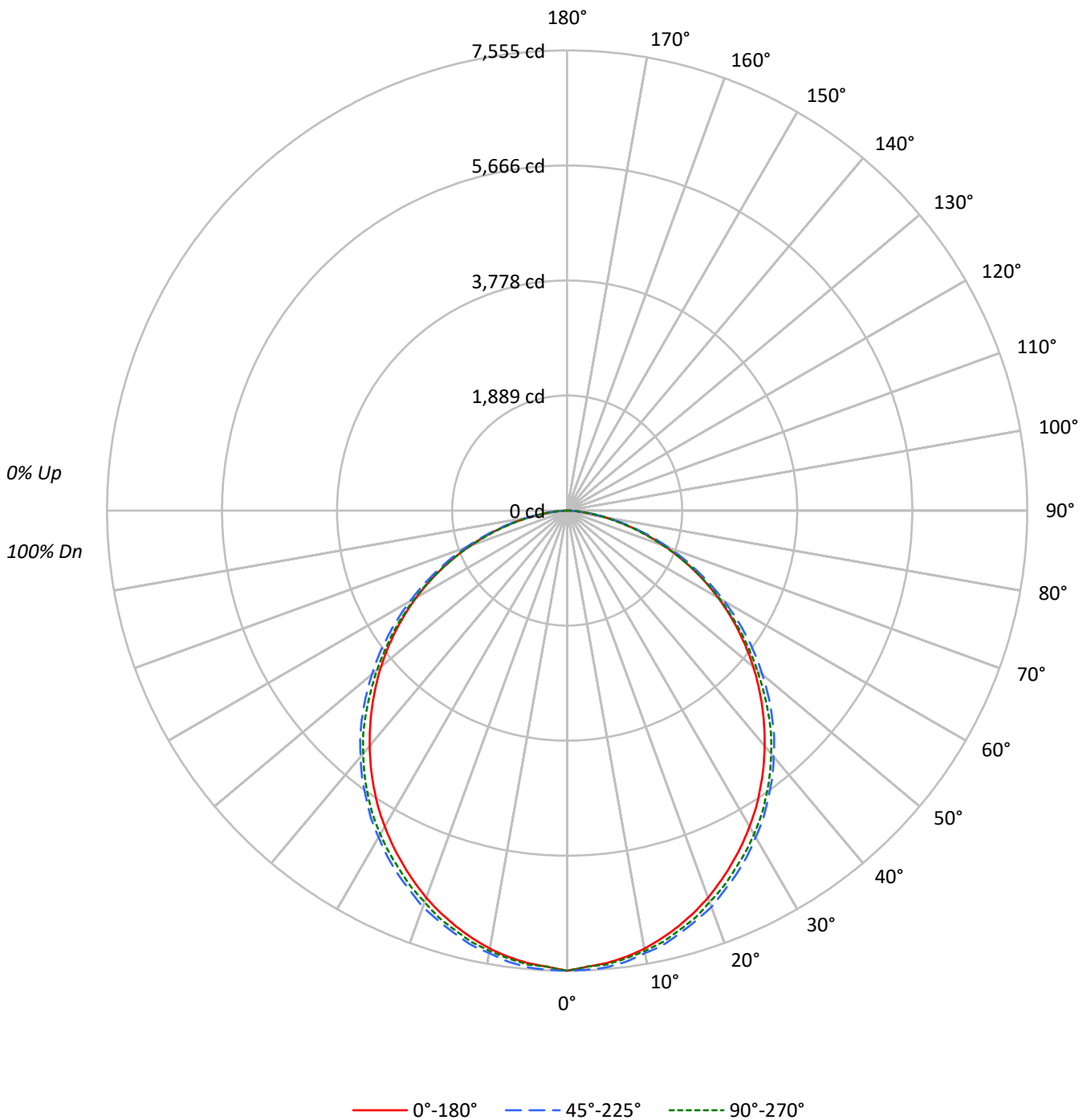
Lumens per Lamp: N/A
Luminaire Lumens: 19862.4 lumens
Efficiency: N/A
Efficacy: 119.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 166.5
Input Voltage (V): NR
Input Current (A_{in}): 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°	10165	10165	10165
5°	10071	10166	10103
10°	9979	10080	10032
15°	9841	10000	9929
20°	9686	9916	9796
25°	9497	9773	9661
30°	9305	9621	9533
35°	9096	9456	9368
40°	8859	9267	9150
45°	8611	9045	8874
50°	8352	8756	8526
55°	8049	8425	8167
60°	7706	8026	7778
65°	7262	7541	7267
70°	6682	6952	6608
75°	5884	6150	5794
80°	4782	4989	4727
85°	3330	3548	3463



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	711.5	3.6
10°-20°	2016.3	10.2
20°-30°	3007.2	15.1
30°-40°	3563.6	17.9
40°-50°	3605.8	18.2
50°-60°	3149.2	15.9
60°-70°	2301.3	11.6
70°-80°	1224.5	6.2
80°-90°	283.0	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°	5735.1	28.9
0°-40°	9298.7	46.8
0°-60°	16053.7	80.8
0°-90°	19862.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	19862.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7555	7555	7555	7555	7555	
5°	7457	7471	7527	7544	7480	707
15°	7065	7112	7179	7222	7128	1992
25°	6397	6476	6583	6607	6507	2947
35°	5538	5624	5757	5797	5704	3463
45°	4525	4606	4754	4758	4664	3491
55°	3431	3500	3592	3540	3482	3067
65°	2281	2328	2368	2321	2283	2257
75°	1132	1158	1183	1140	1115	1203
85°	216	220	230	232	224	273
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7555.0	7555.0	7555.0	7555.0	7555.0
2.5°	7495.9	7520.3	7545.5	7556.5	7495.1
5°	7456.6	7470.7	7526.6	7543.9	7480.2
7.5°	7392.0	7413.3	7467.6	7475.4	7414.1
10°	7303.9	7341.6	7377.8	7417.2	7342.4
12.5°	7191.3	7242.5	7303.9	7310.9	7254.3
15°	7064.6	7111.8	7178.7	7222.0	7128.3
17.5°	6922.9	6968.5	7055.1	7063.0	7006.3
20°	6764.7	6821.3	6925.2	6943.3	6841.8
22.5°	6585.2	6661.5	6748.1	6765.5	6690.7
25°	6397.1	6475.8	6582.8	6607.2	6507.3
27.5°	6200.3	6275.9	6396.3	6413.6	6329.4
30°	5989.3	6060.2	6192.4	6221.5	6135.7
32.5°	5775.2	5846.1	5992.5	6016.9	5933.4
35°	5537.5	5624.1	5757.1	5797.3	5703.6
37.5°	5295.1	5379.3	5530.4	5566.6	5465.9
40°	5044.0	5127.4	5276.2	5306.1	5209.3
42.5°	4787.4	4870.8	5029.8	5034.5	4954.2
45°	4525.3	4605.5	4753.5	4757.5	4663.8
47.5°	4259.2	4340.3	4472.5	4457.6	4369.4
50°	3990.0	4067.1	4182.9	4152.9	4073.4
52.5°	3711.4	3786.1	3895.5	3846.7	3772.0
55°	3431.1	3500.4	3591.7	3539.8	3481.5
57.5°	3148.6	3218.6	3288.7	3235.9	3185.5
60°	2863.6	2925.0	2982.5	2928.9	2890.4
62.5°	2573.9	2626.7	2676.3	2625.1	2588.9
65°	2281.1	2327.6	2368.5	2321.3	2282.7
67.5°	1989.9	2029.2	2067.0	2018.2	1978.1
70°	1698.6	1732.5	1767.1	1716.7	1679.8
72.5°	1411.3	1441.2	1471.9	1423.1	1390.9
75°	1131.9	1157.9	1183.1	1139.8	1114.6
77.5°	865.1	887.1	904.4	876.9	852.5
80°	617.1	633.6	643.9	632.9	610.0
82.5°	396.7	408.5	414.0	413.2	398.3
85°	215.7	219.6	229.8	232.2	224.3
87.5°	83.4	88.9	91.3	98.4	90.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)