

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: P489745

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-5STD-27-120-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: P489745
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-27-120-EDD
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

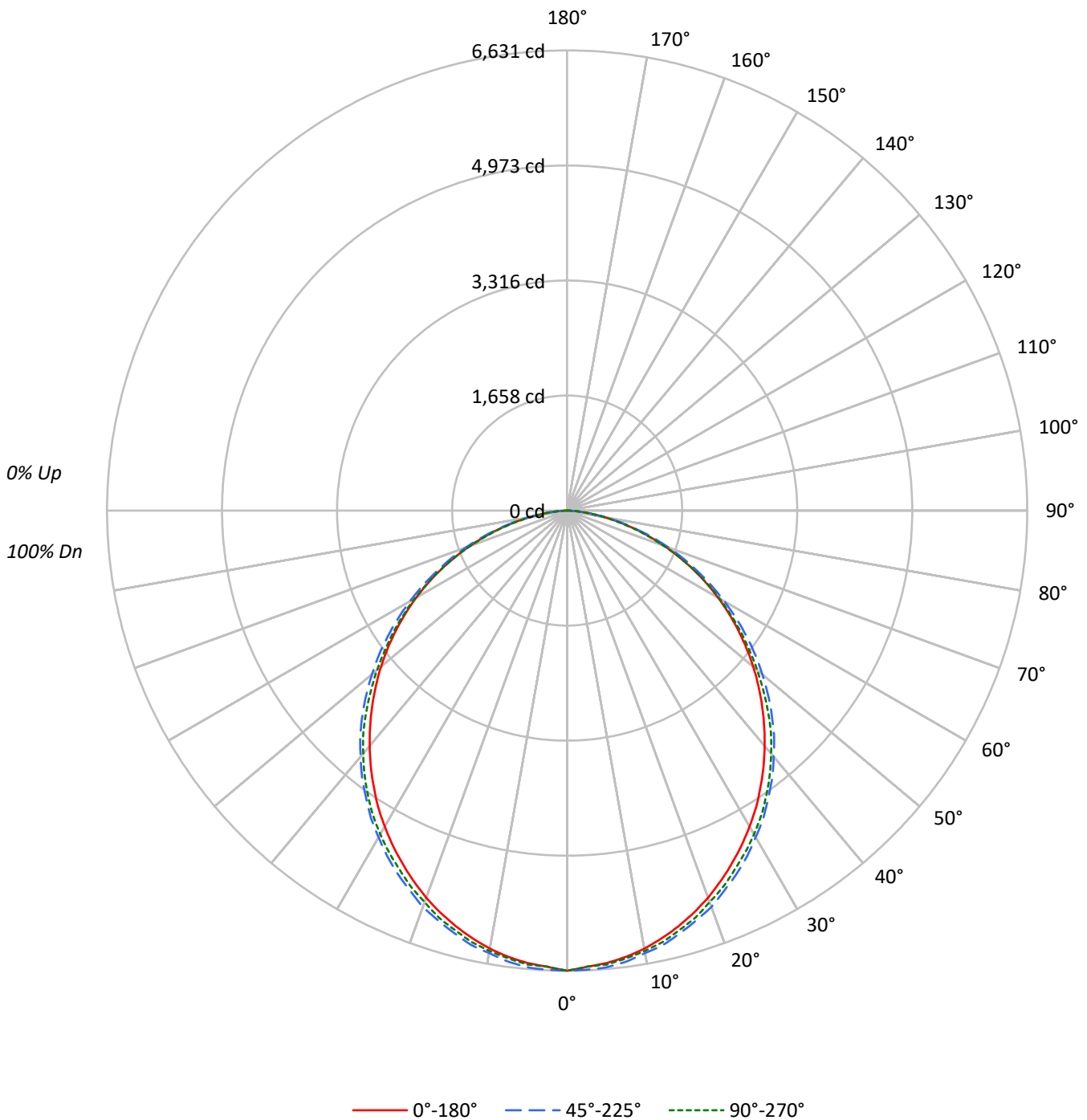
Lumens per Lamp: N/A
Luminaire Lumens: 17433.0 lumens
Efficiency: N/A
Efficacy: 104.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	8922	8922	8922
5°	8839	8922	8867
10°	8758	8847	8805
15°	8637	8777	8715
20°	8501	8703	8598
25°	8335	8577	8479
30°	8167	8444	8367
35°	7983	8300	8223
40°	7776	8134	8030
45°	7558	7939	7789
50°	7330	7685	7484
55°	7064	7395	7168
60°	6764	7044	6826
65°	6374	6618	6379
70°	5865	6102	5800
75°	5165	5398	5086
80°	4197	4379	4148
85°	2922	3114	3040



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	624.5	3.6
10°-20°	1769.7	10.2
20°-30°	2639.4	15.1
30°-40°	3127.7	17.9
40°-50°	3164.8	18.2
50°-60°	2764.0	15.9
60°-70°	2019.8	11.6
70°-80°	1074.7	6.2
80°-90°	248.4	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°	5033.6	28.9
0°-40°	8161.3	46.8
0°-60°	14090.1	80.8
0°-90°	17433.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	17433.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6631	6631	6631	6631	6631	
5°	6544	6557	6606	6621	6565	621
15°	6200	6242	6301	6339	6256	1748
25°	5615	5684	5778	5799	5711	2587
35°	4860	4936	5053	5088	5006	3039
45°	3972	4042	4172	4176	4093	3064
55°	3012	3072	3152	3107	3056	2692
65°	2002	2043	2079	2037	2004	1981
75°	994	1016	1038	1000	978	1056
85°	189	193	202	204	197	240
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6630.9	6630.9	6630.9	6630.9	6630.9
2.5°	6579.1	6600.5	6622.6	6632.3	6578.4
5°	6544.5	6557.0	6606.0	6621.2	6565.3
7.5°	6487.9	6506.5	6554.2	6561.1	6507.2
10°	6410.5	6443.7	6475.4	6510.0	6444.4
12.5°	6311.7	6356.6	6410.5	6416.7	6367.0
15°	6200.5	6241.9	6300.7	6338.7	6256.4
17.5°	6076.1	6116.2	6192.2	6199.1	6149.4
20°	5937.3	5987.0	6078.2	6094.1	6005.0
22.5°	5779.8	5846.8	5922.8	5938.0	5872.3
25°	5614.6	5683.7	5777.7	5799.1	5711.4
27.5°	5441.9	5508.2	5613.9	5629.1	5555.2
30°	5256.8	5318.9	5435.0	5460.6	5385.3
32.5°	5068.9	5131.0	5259.5	5280.9	5207.7
35°	4860.2	4936.2	5053.0	5088.2	5006.0
37.5°	4647.4	4721.4	4854.0	4885.8	4797.3
40°	4427.0	4500.3	4630.8	4657.1	4572.1
42.5°	4201.8	4275.1	4414.6	4418.8	4348.3
45°	3971.8	4042.2	4172.1	4175.6	4093.4
47.5°	3738.3	3809.4	3925.5	3912.4	3835.0
50°	3502.0	3569.7	3671.2	3645.0	3575.2
52.5°	3257.4	3323.0	3419.1	3376.2	3310.6
55°	3011.5	3072.3	3152.4	3106.8	3055.7
57.5°	2763.4	2824.9	2886.4	2840.1	2795.9
60°	2513.4	2567.2	2617.7	2570.7	2536.8
62.5°	2259.1	2305.4	2348.9	2304.0	2272.2
65°	2002.1	2042.9	2078.8	2037.4	2003.5
67.5°	1746.5	1781.0	1814.2	1771.4	1736.1
70°	1490.9	1520.6	1551.0	1506.8	1474.3
72.5°	1238.7	1265.0	1291.9	1249.1	1220.8
75°	993.5	1016.3	1038.4	1000.4	978.3
77.5°	759.3	778.6	793.8	769.6	748.2
80°	541.6	556.1	565.1	555.5	535.4
82.5°	348.2	358.6	363.4	362.7	349.6
85°	189.3	192.8	201.7	203.8	196.9
87.5°	73.2	78.1	80.1	86.4	79.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)