

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: P489744

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-5STD-27-120-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: P489744
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-90
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

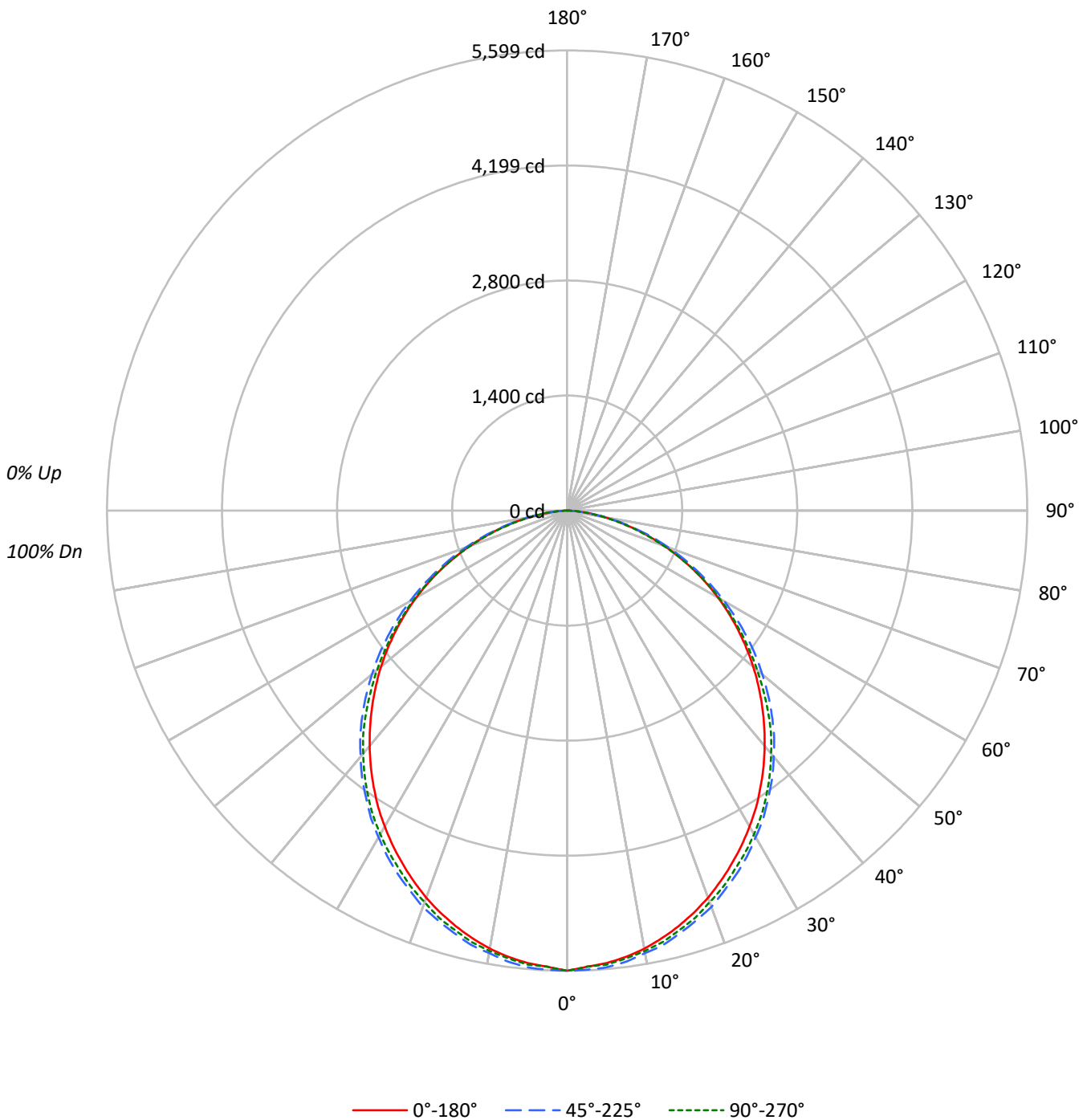
Lumens per Lamp: N/A
Luminaire Lumens: 14720.2 lumens
Efficiency: N/A
Efficacy: 88.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	7533	7533	7533
5°	7464	7534	7487
10°	7395	7470	7434
15°	7293	7411	7359
20°	7178	7349	7260
25°	7038	7243	7160
30°	6896	7130	7065
35°	6741	7008	6943
40°	6566	6868	6781
45°	6381	6703	6577
50°	6190	6489	6319
55°	5965	6244	6053
60°	5711	5948	5764
65°	5382	5588	5386
70°	4952	5152	4897
75°	4361	4558	4294
80°	3544	3698	3503
85°	2467	2629	2567



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	527.3	3.6
10°-20°	1494.3	10.2
20°-30°	2228.7	15.1
30°-40°	2641.0	17.9
40°-50°	2672.3	18.2
50°-60°	2333.9	15.9
60°-70°	1705.5	11.6
70°-80°	907.5	6.2
80°-90°	209.7	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°	4250.3	28.9
0°-40°	6891.3	46.8
0°-60°	11897.5	80.8
0°-90°	14720.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14720.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5599	5599	5599	5599	5599	
5°	5526	5537	5578	5591	5544	524
15°	5236	5271	5320	5352	5283	1476
25°	4741	4799	4879	4897	4823	2184
35°	4104	4168	4267	4296	4227	2566
45°	3354	3413	3523	3526	3456	2587
55°	2543	2594	2662	2623	2580	2273
65°	1691	1725	1755	1720	1692	1673
75°	839	858	877	845	826	892
85°	160	163	170	172	166	202
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5599.0	5599.0	5599.0	5599.0	5599.0
2.5°	5555.3	5573.4	5592.0	5600.2	5554.7
5°	5526.1	5536.6	5578.0	5590.9	5543.6
7.5°	5478.3	5494.0	5534.3	5540.1	5494.6
10°	5413.0	5441.0	5467.8	5497.0	5441.5
12.5°	5329.5	5367.4	5413.0	5418.2	5376.2
15°	5235.6	5270.6	5320.2	5352.3	5282.9
17.5°	5130.6	5164.4	5228.6	5234.4	5192.4
20°	5013.4	5055.4	5132.4	5145.8	5070.5
22.5°	4880.3	4936.9	5001.1	5013.9	4958.5
25°	4740.9	4799.3	4878.6	4896.7	4822.6
27.5°	4595.1	4651.1	4740.3	4753.2	4690.8
30°	4438.7	4491.2	4589.3	4610.8	4547.3
32.5°	4280.1	4332.6	4441.1	4459.2	4397.3
35°	4103.9	4168.1	4266.7	4296.4	4227.0
37.5°	3924.2	3986.6	4098.7	4125.5	4050.8
40°	3738.1	3800.0	3910.2	3932.4	3860.6
42.5°	3548.0	3609.8	3727.6	3731.1	3671.6
45°	3353.7	3413.2	3522.9	3525.8	3456.4
47.5°	3156.5	3216.6	3314.6	3303.5	3238.2
50°	2957.0	3014.2	3099.9	3077.8	3018.9
52.5°	2750.5	2805.9	2887.0	2850.9	2795.4
55°	2542.8	2594.2	2661.8	2623.3	2580.2
57.5°	2333.4	2385.3	2437.3	2398.2	2360.8
60°	2122.2	2167.7	2210.3	2170.7	2142.1
62.5°	1907.6	1946.7	1983.4	1945.5	1918.7
65°	1690.6	1725.0	1755.3	1720.3	1691.7
67.5°	1474.7	1503.9	1531.9	1495.7	1466.0
70°	1258.9	1284.0	1309.6	1272.3	1244.9
72.5°	1046.0	1068.1	1090.9	1054.7	1030.8
75°	838.9	858.1	876.8	844.7	826.0
77.5°	641.1	657.4	670.3	649.9	631.8
80°	457.4	469.6	477.2	469.0	452.1
82.5°	294.0	302.8	306.8	306.3	295.2
85°	159.8	162.8	170.3	172.1	166.3
87.5°	61.8	65.9	67.7	72.9	67.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)