

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: P489711

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-4STD-30-120-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: P489711
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-LD4-4STD-30-120-EDD
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

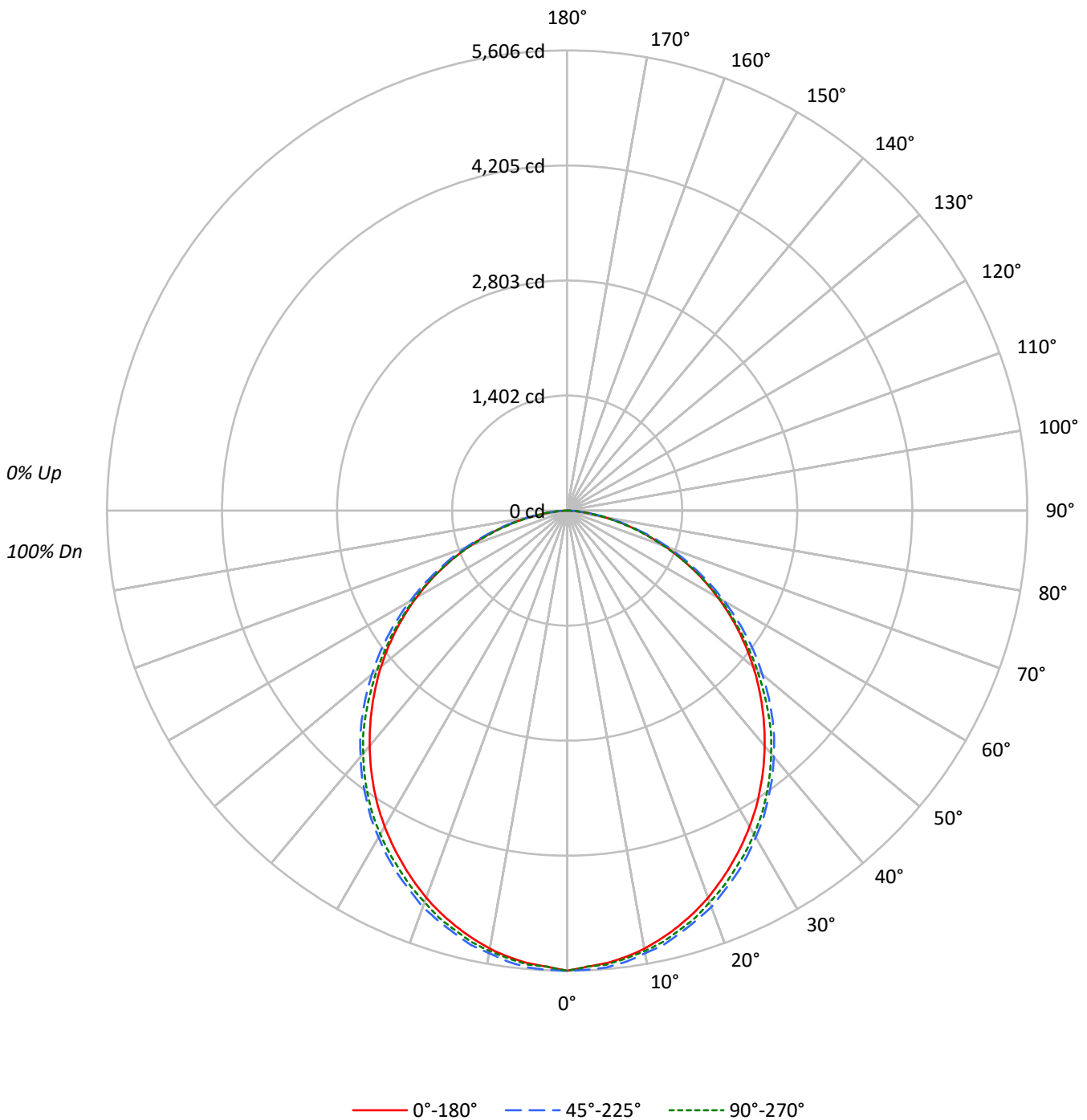
Lumens per Lamp: N/A
Luminaire Lumens: 14739.4 lumens
Efficiency: N/A
Efficacy: 110.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 133.2
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°	7543	7543	7543
5°	7473	7544	7497
10°	7405	7480	7444
15°	7302	7420	7368
20°	7188	7358	7270
25°	7047	7252	7169
30°	6905	7139	7074
35°	6750	7017	6952
40°	6574	6877	6790
45°	6390	6712	6585
50°	6198	6497	6327
55°	5973	6252	6060
60°	5718	5956	5772
65°	5389	5596	5393
70°	4959	5159	4904
75°	4367	4564	4300
80°	3548	3702	3508
85°	2470	2634	2570



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	528.0	3.6
10°-20°	1496.3	10.2
20°-30°	2231.6	15.1
30°-40°	2644.5	17.9
40°-50°	2675.8	18.2
50°-60°	2336.9	15.9
60°-70°	1707.7	11.6
70°-80°	908.6	6.2
80°-90°	210.0	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°	4255.9	28.9
0°-40°	6900.3	46.8
0°-60°	11913.0	80.8
0°-90°	14739.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14739.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5606	5606	5606	5606	5606	
5°	5533	5544	5585	5598	5551	525
15°	5242	5278	5327	5359	5290	1478
25°	4747	4806	4885	4903	4829	2187
35°	4109	4174	4272	4302	4232	2570
45°	3358	3418	3528	3530	3461	2591
55°	2546	2598	2665	2627	2584	2276
65°	1693	1727	1758	1723	1694	1675
75°	840	859	878	846	827	893
85°	160	163	171	172	166	203
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5606.3	5606.3	5606.3	5606.3	5606.3
2.5°	5562.5	5580.6	5599.3	5607.5	5562.0
5°	5533.3	5543.8	5585.3	5598.2	5550.9
7.5°	5485.4	5501.2	5541.5	5547.3	5501.8
10°	5420.0	5448.0	5474.9	5504.1	5448.6
12.5°	5336.5	5374.4	5420.0	5425.3	5383.2
15°	5242.4	5277.5	5327.1	5359.3	5289.8
17.5°	5137.3	5171.2	5235.4	5241.3	5199.2
20°	5019.9	5061.9	5139.1	5152.5	5077.1
22.5°	4886.7	4943.4	5007.6	5020.5	4965.0
25°	4747.1	4805.5	4885.0	4903.1	4828.9
27.5°	4601.1	4657.2	4746.5	4759.4	4696.9
30°	4444.5	4497.1	4595.2	4616.9	4553.2
32.5°	4285.7	4338.2	4446.9	4465.0	4403.1
35°	4109.3	4173.5	4272.2	4302.0	4232.5
37.5°	3929.3	3991.8	4104.0	4130.9	4056.1
40°	3743.0	3804.9	3915.3	3937.5	3865.7
42.5°	3552.6	3614.5	3732.5	3736.0	3676.4
45°	3358.1	3417.7	3527.5	3530.4	3460.9
47.5°	3160.7	3220.8	3318.9	3307.8	3242.4
50°	2960.9	3018.1	3104.0	3081.8	3022.8
52.5°	2754.1	2809.6	2890.8	2854.6	2799.1
55°	2546.2	2597.6	2665.3	2626.8	2583.5
57.5°	2336.5	2388.4	2440.4	2401.3	2363.9
60°	2125.0	2170.6	2213.2	2173.5	2144.9
62.5°	1910.1	1949.2	1986.0	1948.0	1921.2
65°	1692.8	1727.2	1757.6	1722.6	1693.9
67.5°	1476.6	1505.9	1533.9	1497.7	1467.9
70°	1260.5	1285.6	1311.3	1274.0	1246.5
72.5°	1047.3	1069.5	1092.3	1056.1	1032.1
75°	840.0	859.2	877.9	845.8	827.1
77.5°	641.9	658.3	671.1	650.7	632.6
80°	457.9	470.2	477.8	469.6	452.7
82.5°	294.4	303.2	307.2	306.7	295.6
85°	160.0	163.0	170.6	172.3	166.5
87.5°	61.9	66.0	67.8	73.0	67.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)