

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: P489620

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-2HI-50-120-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: P489620
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-LD4-2HI-50-120-EDD-90
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

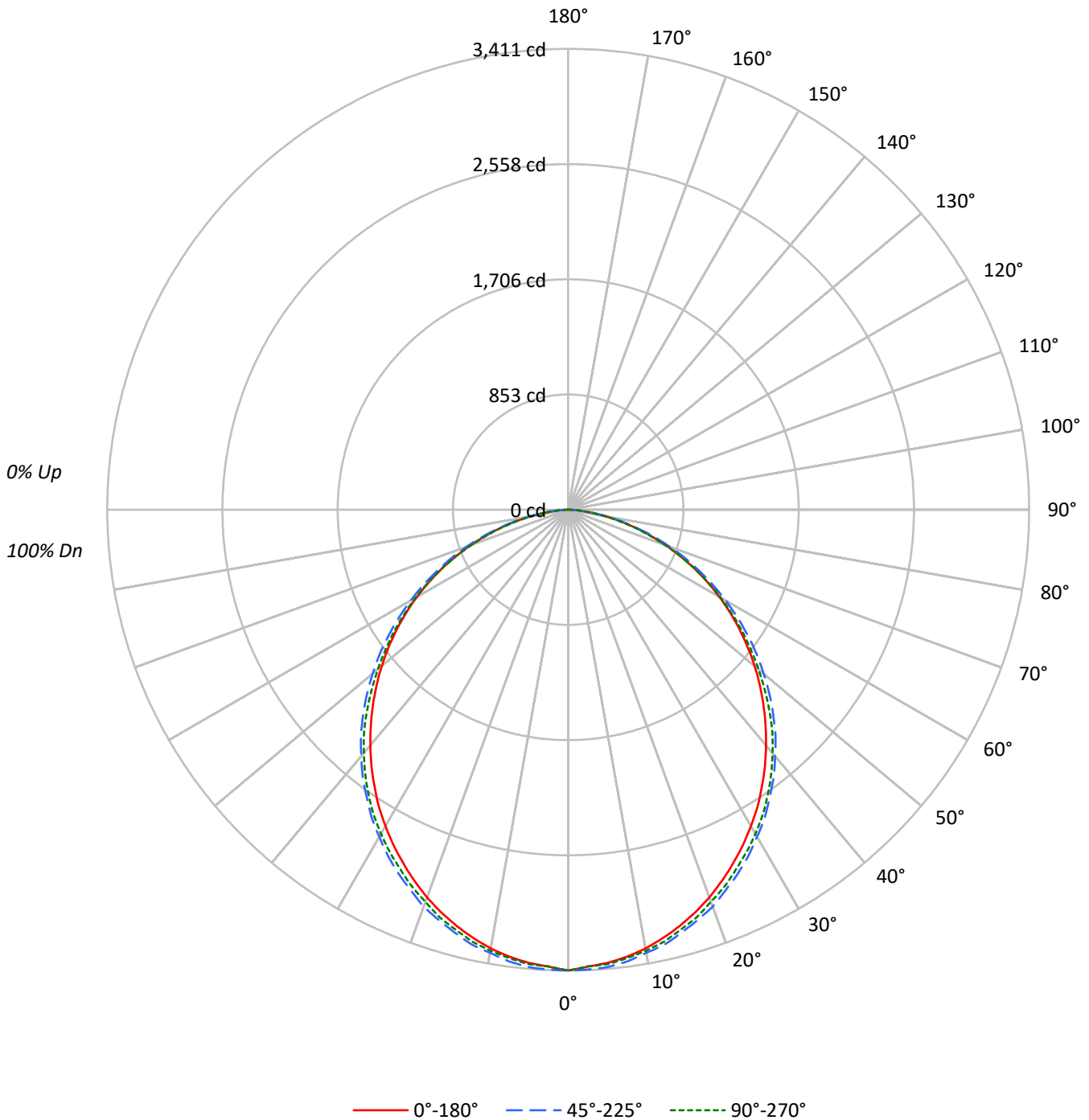
Lumens per Lamp: N/A
Luminaire Lumens: 8967.1 lumens
Efficiency: N/A
Efficacy: 103.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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°	4589	4589	4589
5°	4547	4589	4561
10°	4505	4551	4529
15°	4443	4514	4483
20°	4373	4477	4423
25°	4287	4412	4361
30°	4201	4343	4304
35°	4106	4269	4230
40°	4000	4184	4131
45°	3887	4083	4006
50°	3770	3953	3849
55°	3634	3804	3687
60°	3479	3623	3511
65°	3279	3404	3281
70°	3017	3139	2983
75°	2656	2777	2616
80°	2159	2252	2134
85°	1504	1602	1564



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	321.2	3.6
10°-20°	910.3	10.2
20°-30°	1357.7	15.1
30°-40°	1608.8	17.9
40°-50°	1627.9	18.2
50°-60°	1421.7	15.9
60°-70°	1038.9	11.6
70°-80°	552.8	6.2
80°-90°	127.8	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°	2589.2	28.9
0°-40°	4198.0	46.8
0°-60°	7247.6	80.8
0°-90°	8967.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8967.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3411	3411	3411	3411	3411	
5°	3366	3373	3398	3406	3377	319
15°	3189	3211	3241	3260	3218	899
25°	2888	2924	2972	2983	2938	1331
35°	2500	2539	2599	2617	2575	1563
45°	2043	2079	2146	2148	2106	1576
55°	1549	1580	1622	1598	1572	1385
65°	1030	1051	1069	1048	1031	1019
75°	511	523	534	515	503	543
85°	97	99	104	105	101	123
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3410.8	3410.8	3410.8	3410.8	3410.8
2.5°	3384.1	3395.1	3406.5	3411.5	3383.8
5°	3366.3	3372.7	3398.0	3405.8	3377.0
7.5°	3337.2	3346.8	3371.3	3374.9	3347.2
10°	3297.4	3314.5	3330.8	3348.6	3314.8
12.5°	3246.6	3269.7	3297.4	3300.6	3275.0
15°	3189.4	3210.7	3240.9	3260.4	3218.2
17.5°	3125.4	3146.0	3185.1	3188.7	3163.1
20°	3054.0	3079.6	3126.5	3134.6	3088.8
22.5°	2973.0	3007.4	3046.5	3054.3	3020.6
25°	2888.0	2923.6	2971.9	2982.9	2937.8
27.5°	2799.2	2833.3	2887.7	2895.5	2857.5
30°	2704.0	2735.9	2795.6	2808.8	2770.0
32.5°	2607.3	2639.3	2705.4	2716.4	2678.7
35°	2500.0	2539.1	2599.1	2617.2	2575.0
37.5°	2390.5	2428.5	2496.8	2513.1	2467.6
40°	2277.2	2314.8	2382.0	2395.5	2351.8
42.5°	2161.3	2199.0	2270.8	2272.9	2236.6
45°	2043.0	2079.2	2146.0	2147.8	2105.5
47.5°	1922.9	1959.5	2019.2	2012.4	1972.6
50°	1801.3	1836.2	1888.4	1874.9	1839.0
52.5°	1675.5	1709.3	1758.7	1736.7	1702.9
55°	1549.0	1580.3	1621.5	1598.1	1571.8
57.5°	1421.4	1453.1	1484.7	1460.9	1438.2
60°	1292.8	1320.5	1346.5	1322.3	1304.9
62.5°	1162.0	1185.8	1208.2	1185.1	1168.8
65°	1029.8	1050.8	1069.3	1048.0	1030.6
67.5°	898.4	916.1	933.2	911.1	893.0
70°	766.9	782.2	797.8	775.0	758.3
72.5°	637.2	650.7	664.5	642.5	627.9
75°	511.0	522.7	534.1	514.6	503.2
77.5°	390.5	400.5	408.3	395.9	384.9
80°	278.6	286.1	290.7	285.7	275.4
82.5°	179.1	184.4	186.9	186.6	179.8
85°	97.4	99.1	103.8	104.8	101.3
87.5°	37.7	40.2	41.2	44.4	40.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)