

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: P489145

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-4HI-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: P489145
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-24-2-INS-A19156-LD4-4HI-27-120-EDD
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

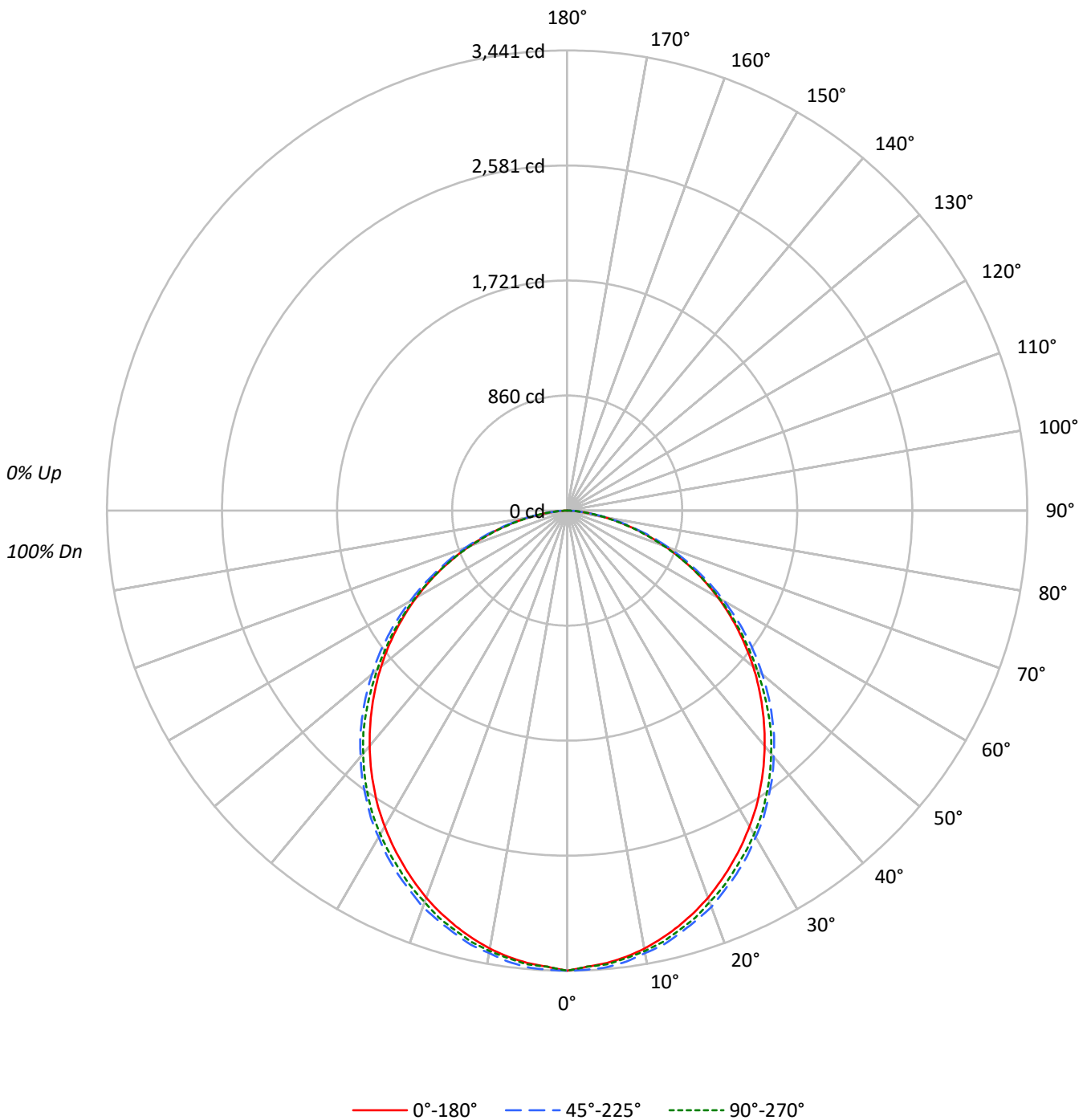
Lumens per Lamp: N/A
Luminaire Lumens: 9046.0 lumens
Efficiency: N/A
Efficacy: 104.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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	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°	9259	9259	9259
5°	9173	9260	9202
10°	9089	9181	9137
15°	8963	9108	9044
20°	8823	9032	8923
25°	8650	8902	8799
30°	8476	8763	8683
35°	8285	8613	8533
40°	8070	8441	8334
45°	7843	8239	8083
50°	7608	7975	7767
55°	7332	7674	7439
60°	7019	7310	7085
65°	6615	6869	6620
70°	6087	6332	6019
75°	5360	5602	5278
80°	4356	4544	4305
85°	3032	3233	3155



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	324.1	3.6
10°-20°	918.3	10.2
20°-30°	1369.6	15.1
30°-40°	1623.0	17.9
40°-50°	1642.2	18.2
50°-60°	1434.2	15.9
60°-70°	1048.1	11.6
70°-80°	557.7	6.2
80°-90°	128.9	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°	2611.9	28.9
0°-40°	4234.9	46.8
0°-60°	7311.4	80.8
0°-90°	9046.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9046.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3441	3441	3441	3441	3441	
5°	3396	3402	3428	3436	3407	322
15°	3217	3239	3269	3289	3246	907
25°	2913	2949	2998	3009	2964	1342
35°	2522	2561	2622	2640	2598	1577
45°	2061	2098	2165	2167	2124	1590
55°	1563	1594	1636	1612	1586	1397
65°	1039	1060	1079	1057	1040	1028
75°	516	527	539	519	508	548
85°	98	100	105	106	102	124
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3440.8	3440.8	3440.8	<i>3440.8</i>	3440.8
2.5°	<i>3413.9</i>	<i>3425.0</i>	<i>3436.5</i>	<i>3441.5</i>	<i>3413.5</i>
5°	3396.0	3402.4	3427.9	<i>3435.8</i>	3406.7
7.5°	3366.6	3376.2	3401.0	<i>3404.6</i>	3376.6
10°	3326.4	3343.6	3360.1	<i>3378.0</i>	3344.0
12.5°	3275.2	3298.5	3326.4	<i>3329.6</i>	3303.8
15°	3217.4	3238.9	3269.4	<i>3289.1</i>	3246.5
17.5°	3152.9	3173.7	3213.1	<i>3216.7</i>	3190.9
20°	3080.9	3106.7	3154.0	<i>3162.2</i>	3116.0
22.5°	2999.1	3033.9	3073.3	<i>3081.2</i>	3047.2
25°	2913.4	2949.3	2998.0	<i>3009.2</i>	2963.6
27.5°	2823.8	2858.2	2913.1	<i>2921.0</i>	2882.6
30°	2727.7	2760.0	2820.2	<i>2833.5</i>	2794.4
32.5°	2630.2	2662.5	2729.2	<i>2740.3</i>	2702.3
35°	2522.0	2561.4	2622.0	<i>2640.3</i>	2597.6
37.5°	2411.6	2449.9	2518.7	<i>2535.2</i>	2489.3
40°	2297.2	2335.2	2403.0	<i>2416.6</i>	2372.5
42.5°	2180.3	2218.3	2290.7	<i>2292.9</i>	2256.3
45°	2061.0	2097.5	2164.9	<i>2166.7</i>	2124.0
47.5°	1939.8	1976.7	2036.9	<i>2030.1</i>	1990.0
50°	1817.2	1852.3	1905.0	<i>1891.4</i>	1855.2
52.5°	1690.3	1724.3	1774.2	<i>1751.9</i>	1717.9
55°	1562.7	1594.2	1635.8	<i>1612.1</i>	1585.6
57.5°	1434.0	1465.9	1497.8	<i>1473.7</i>	1450.8
60°	1304.2	1332.1	1358.3	<i>1333.9</i>	1316.4
62.5°	1172.3	1196.3	1218.9	<i>1195.6</i>	1179.1
65°	1038.9	1060.1	1078.7	<i>1057.2</i>	1039.6
67.5°	906.3	924.2	941.4	<i>919.2</i>	900.9
70°	773.6	789.0	804.8	<i>781.9</i>	765.0
72.5°	642.8	656.4	670.4	<i>648.1</i>	633.4
75°	515.5	527.3	538.8	<i>519.1</i>	507.6
77.5°	394.0	404.0	411.9	<i>399.4</i>	388.2
80°	281.1	288.6	293.2	<i>288.2</i>	277.8
82.5°	180.7	186.1	188.6	<i>188.2</i>	181.4
85°	98.2	100.0	104.7	<i>105.8</i>	102.2
87.5°	38.0	40.5	41.6	<i>44.8</i>	41.2
90°	0.0	0.0	0.0	<i>0.0</i>	0.0

(END OF REPORT)