

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: P489179

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-5HI-20-120-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: P489179
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-LD4-5HI-20-120-EDD
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

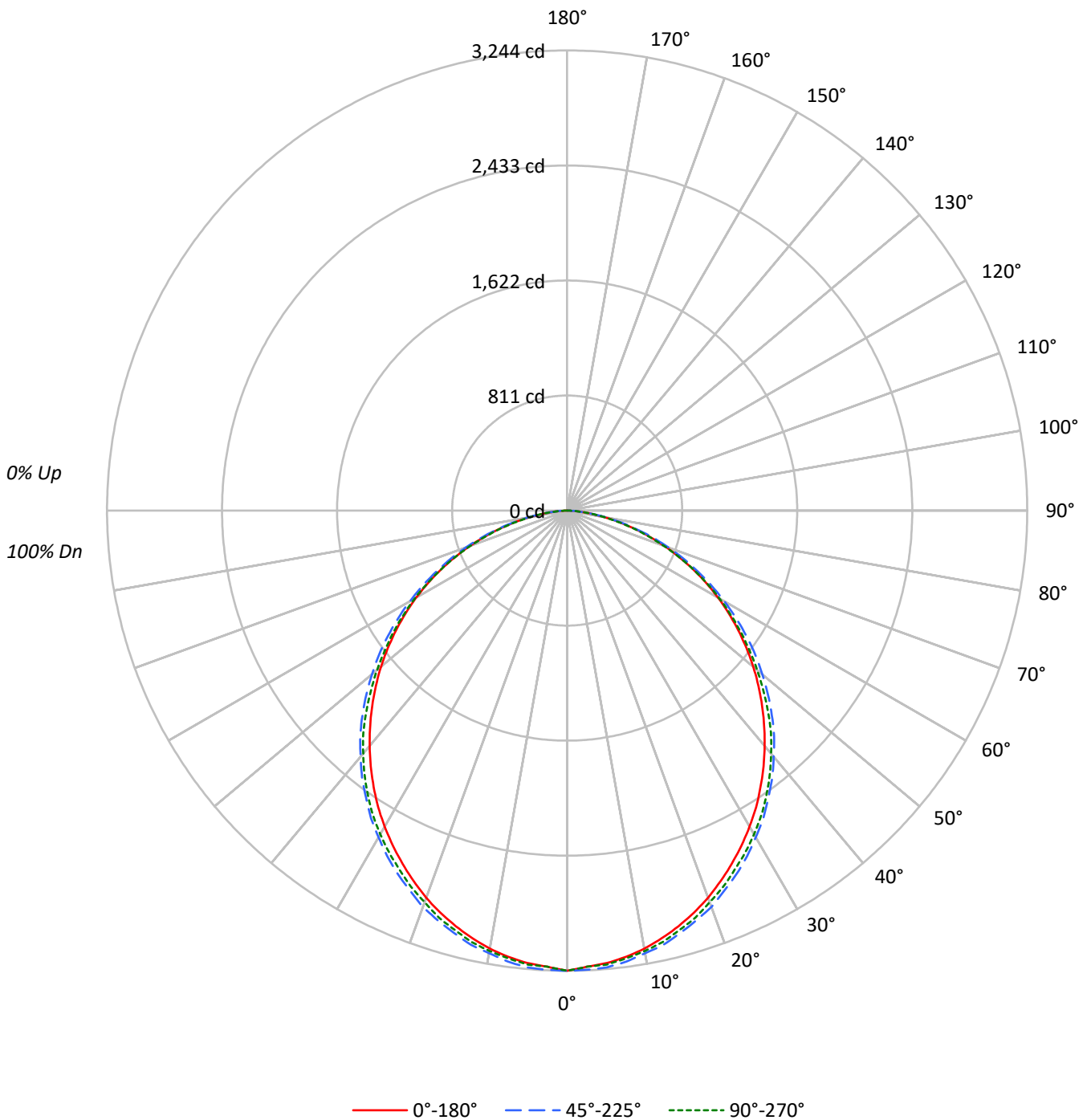
Lumens per Lamp: N/A
Luminaire Lumens: 8529.1 lumens
Efficiency: N/A
Efficacy: 79.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 108
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°	8730	8730	8730
5°	8649	8730	8677
10°	8570	8657	8615
15°	8451	8588	8528
20°	8318	8516	8413
25°	8156	8393	8297
30°	7992	8263	8187
35°	7812	8121	8046
40°	7608	7959	7858
45°	7395	7768	7622
50°	7173	7520	7323
55°	6913	7236	7014
60°	6618	6893	6680
65°	6237	6476	6241
70°	5739	5970	5675
75°	5054	5282	4976
80°	4107	4285	4060
85°	2859	3047	2973



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	305.5	3.6
10°-20°	865.8	10.2
20°-30°	1291.3	15.1
30°-40°	1530.2	17.9
40°-50°	1548.4	18.2
50°-60°	1352.3	15.9
60°-70°	988.2	11.6
70°-80°	525.8	6.2
80°-90°	121.5	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°	2462.7	28.9
0°-40°	3992.9	46.8
0°-60°	6893.6	80.8
0°-90°	8529.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8529.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3244	3244	3244	3244	3244	
5°	3202	3208	3232	3239	3212	304
15°	3034	3054	3083	3101	3061	855
25°	2747	2781	2827	2837	2794	1266
35°	2378	2415	2472	2489	2449	1487
45°	1943	1978	2041	2043	2003	1499
55°	1473	1503	1542	1520	1495	1317
65°	980	1000	1017	997	980	969
75°	486	497	508	489	479	517
85°	93	94	99	100	96	117
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3244.2	3244.2	3244.2	3244.2	3244.2
2.5°	3218.8	3229.3	3240.1	3244.8	3218.5
5°	3201.9	3208.0	3232.0	3239.4	3212.1
7.5°	3174.2	3183.3	3206.6	3210.0	3183.7
10°	3136.3	3152.6	3168.1	3185.0	3152.9
12.5°	3088.0	3110.0	3136.3	3139.4	3115.0
15°	3033.6	3053.9	3082.6	3101.2	3061.0
17.5°	2972.7	2992.4	3029.5	3032.9	3008.6
20°	2904.8	2929.1	2973.8	2981.5	2937.9
22.5°	2827.7	2860.5	2897.7	2905.1	2873.0
25°	2747.0	2780.8	2826.7	2837.2	2794.3
27.5°	2662.5	2694.9	2746.6	2754.1	2717.9
30°	2571.9	2602.3	2659.1	2671.6	2634.7
32.5°	2479.9	2510.4	2573.2	2583.7	2547.9
35°	2377.9	2415.0	2472.2	2489.4	2449.2
37.5°	2273.8	2309.9	2374.8	2390.4	2347.1
40°	2165.9	2201.8	2265.6	2278.5	2236.9
42.5°	2055.7	2091.6	2159.8	2161.9	2127.4
45°	1943.2	1977.7	2041.2	2042.9	2002.7
47.5°	1828.9	1863.8	1920.5	1914.1	1876.3
50°	1713.3	1746.5	1796.2	1783.3	1749.2
52.5°	1593.7	1625.8	1672.8	1651.8	1619.7
55°	1473.4	1503.1	1542.3	1520.0	1495.0
57.5°	1352.0	1382.1	1412.2	1389.5	1367.9
60°	1229.7	1256.0	1280.7	1257.7	1241.2
62.5°	1105.3	1127.9	1149.2	1127.2	1111.7
65°	979.5	999.5	1017.1	996.8	980.2
67.5°	854.5	871.4	887.6	866.6	849.4
70°	729.4	743.9	758.8	737.2	721.3
72.5°	606.0	618.9	632.1	611.1	597.3
75°	486.1	497.2	508.0	489.4	478.6
77.5°	371.5	380.9	388.4	376.5	366.1
80°	265.0	272.1	276.5	271.8	262.0
82.5°	170.4	175.4	177.8	177.5	171.0
85°	92.6	94.3	98.7	99.7	96.3
87.5°	35.8	38.2	39.2	42.3	38.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)