

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: P489671

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-3STD-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: P489671
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-LD4-3STD-20-120-EDD
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

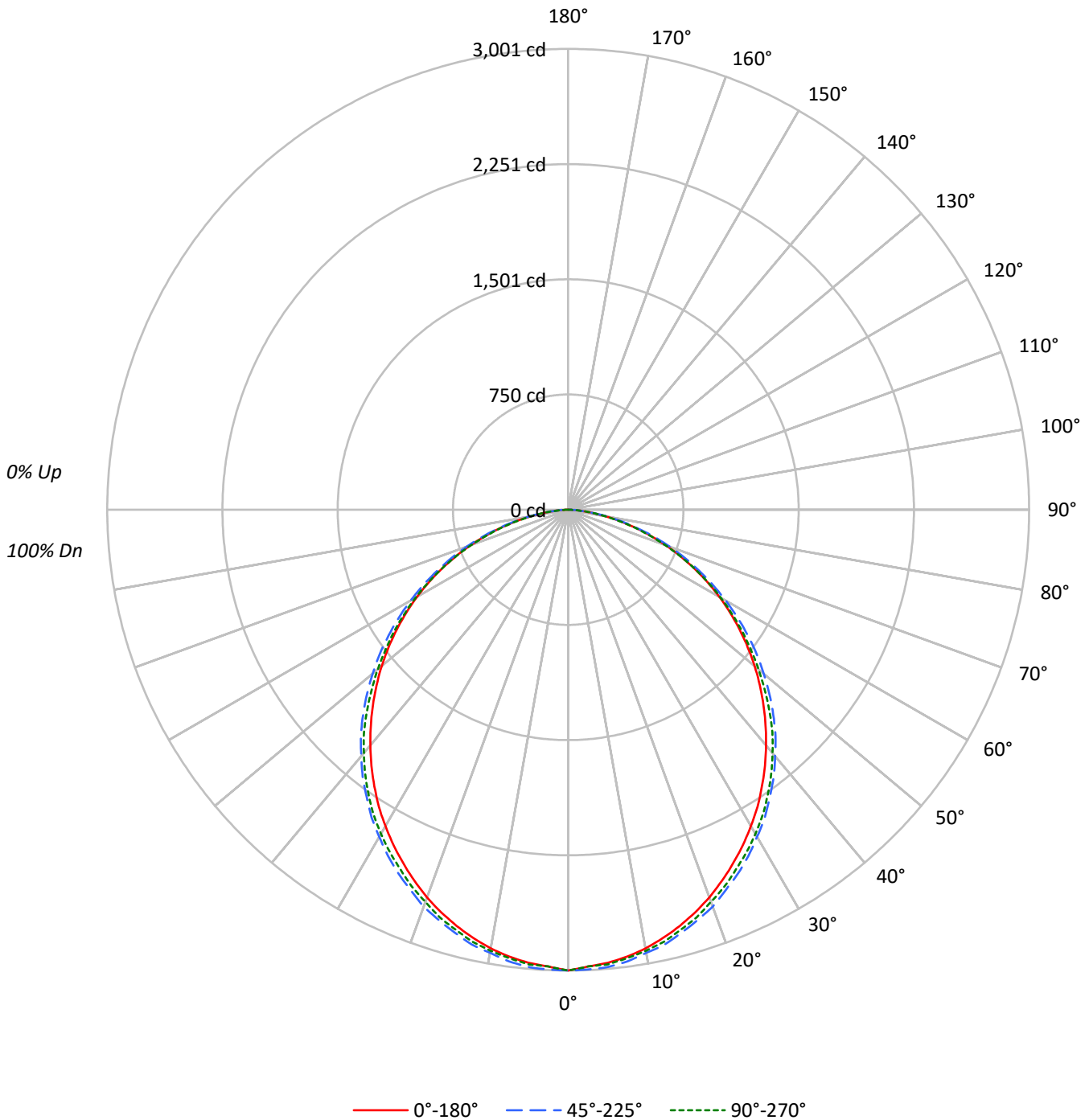
Lumens per Lamp: N/A
Luminaire Lumens: 7889.8 lumens
Efficiency: N/A
Efficacy: 79.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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°	4038	4038	4038
5°	4000	4038	4013
10°	3964	4004	3985
15°	3909	3972	3944
20°	3847	3939	3891
25°	3772	3882	3837
30°	3696	3822	3787
35°	3613	3756	3721
40°	3519	3681	3634
45°	3420	3593	3525
50°	3318	3478	3387
55°	3197	3347	3244
60°	3061	3188	3090
65°	2885	2995	2887
70°	2654	2761	2625
75°	2337	2443	2301
80°	1899	1982	1877
85°	1323	1409	1376



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	282.6	3.6
10°-20°	800.9	10.2
20°-30°	1194.5	15.1
30°-40°	1415.5	17.9
40°-50°	1432.3	18.2
50°-60°	1250.9	15.9
60°-70°	914.1	11.6
70°-80°	486.4	6.2
80°-90°	112.4	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°	2278.1	28.9
0°-40°	3693.7	46.8
0°-60°	6376.9	80.8
0°-90°	7889.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7889.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3001	3001	3001	3001	3001	
5°	2962	2968	2990	2997	2971	281
15°	2806	2825	2852	2869	2832	791
25°	2541	2572	2615	2624	2585	1171
35°	2200	2234	2287	2303	2266	1376
45°	1798	1829	1888	1890	1853	1387
55°	1363	1390	1427	1406	1383	1218
65°	906	925	941	922	907	897
75°	450	460	470	453	443	478
85°	86	87	91	92	89	108
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3001.0	3001.0	3001.0	3001.0	3001.0
2.5°	2977.5	2987.2	2997.2	3001.6	2977.2
5°	2961.9	2967.5	2989.7	2996.6	2971.3
7.5°	2936.3	2944.7	2966.3	2969.4	2945.0
10°	2901.3	2916.3	2930.6	2946.3	2916.6
12.5°	2856.5	2876.9	2901.3	2904.1	2881.6
15°	2806.2	2825.0	2851.5	2868.7	2831.5
17.5°	2749.9	2768.1	2802.5	2805.6	2783.1
20°	2687.1	2709.6	2750.9	2758.1	2717.7
22.5°	2615.8	2646.1	2680.5	2687.4	2657.7
25°	2541.1	2572.3	2614.9	2624.5	2584.8
27.5°	2462.9	2492.9	2540.8	2547.6	2514.2
30°	2379.1	2407.2	2459.8	2471.3	2437.3
32.5°	2294.1	2322.2	2380.4	2390.0	2356.9
35°	2199.6	2234.0	2286.9	2302.8	2265.6
37.5°	2103.3	2136.8	2196.8	2211.2	2171.2
40°	2003.6	2036.7	2095.8	2107.7	2069.2
42.5°	1901.7	1934.8	1998.0	1999.8	1967.9
45°	1797.5	1829.4	1888.2	1889.8	1852.6
47.5°	1691.9	1724.1	1776.6	1770.6	1735.6
50°	1584.9	1615.6	1661.5	1649.6	1618.1
52.5°	1474.2	1503.9	1547.4	1528.0	1498.3
55°	1362.9	1390.4	1426.7	1406.1	1382.9
57.5°	1250.7	1278.5	1306.3	1285.4	1265.4
60°	1137.5	1161.9	1184.7	1163.4	1148.1
62.5°	1022.4	1043.4	1063.1	1042.8	1028.4
65°	906.1	924.6	940.8	922.1	906.7
67.5°	790.4	806.1	821.1	801.7	785.7
70°	674.7	688.2	701.9	681.9	667.2
72.5°	560.6	572.5	584.7	565.3	552.5
75°	449.6	459.9	469.9	452.7	442.7
77.5°	343.6	352.4	359.3	348.3	338.6
80°	245.1	251.7	255.8	251.4	242.3
82.5°	157.6	162.3	164.5	164.2	158.2
85°	85.7	87.2	91.3	92.2	89.1
87.5°	33.1	35.3	36.3	39.1	36.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)