

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: P489646

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-3HI-20-120-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: P489646
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-LD4-3HI-20-120-EDD-90
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

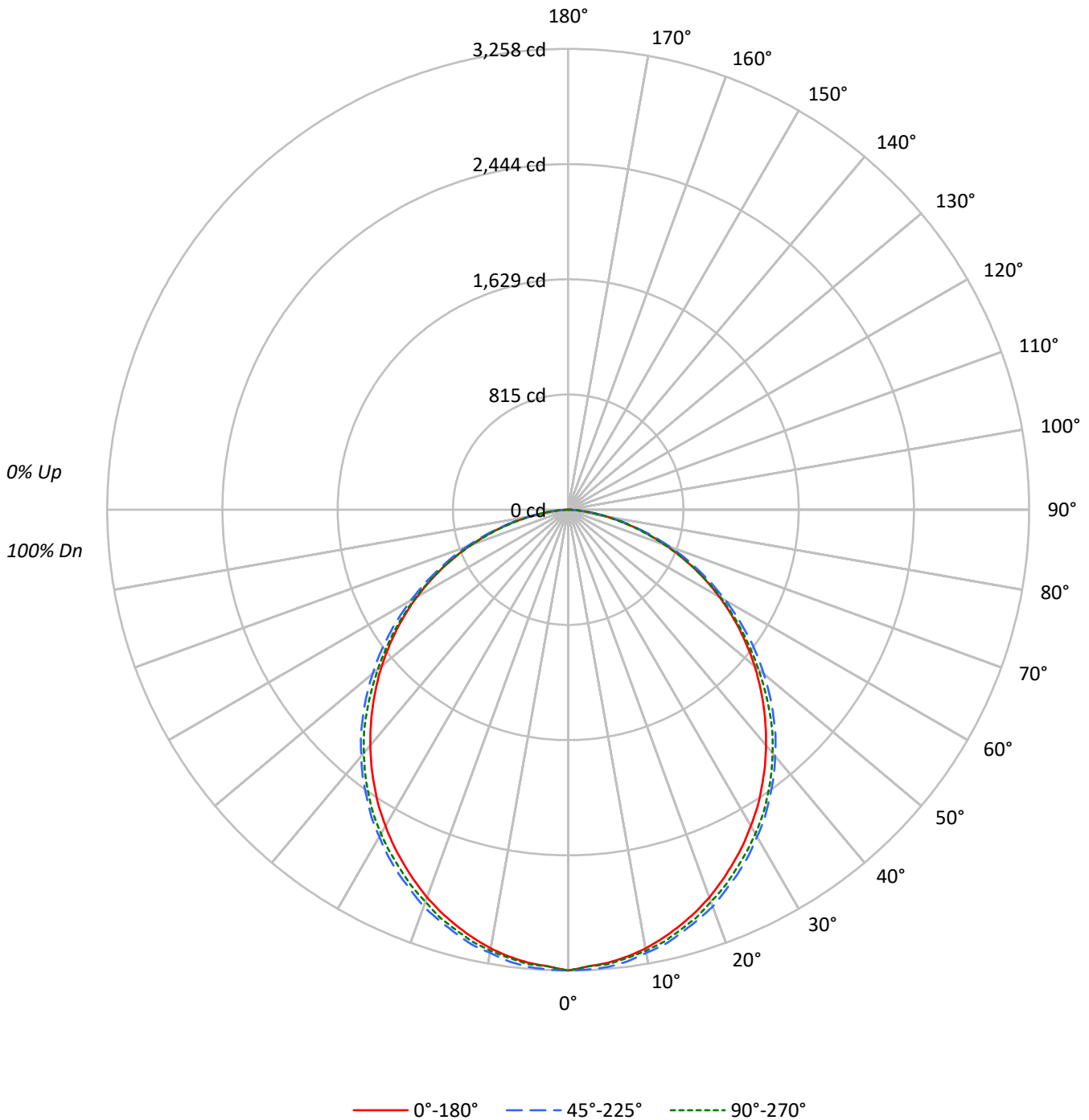
Lumens per Lamp: N/A
Luminaire Lumens: 8564.4 lumens
Efficiency: N/A
Efficacy: 66.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 129.6
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°	4383	4383	4383
5°	4343	4383	4356
10°	4303	4346	4326
15°	4243	4312	4281
20°	4176	4276	4224
25°	4095	4214	4165
30°	4012	4148	4110
35°	3922	4077	4039
40°	3820	3996	3945
45°	3713	3900	3827
50°	3601	3775	3677
55°	3471	3633	3521
60°	3323	3461	3354
65°	3131	3252	3134
70°	2881	2998	2849
75°	2537	2652	2498
80°	2062	2151	2038
85°	1436	1530	1493



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	306.8	3.6
10°-20°	869.4	10.2
20°-30°	1296.7	15.1
30°-40°	1536.6	17.9
40°-50°	1554.8	18.2
50°-60°	1357.9	15.9
60°-70°	992.3	11.6
70°-80°	528.0	6.2
80°-90°	122.0	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°	2472.9	28.9
0°-40°	4009.5	46.8
0°-60°	6922.1	80.8
0°-90°	8564.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8564.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3258	3258	3258	3258	3258	
5°	3215	3221	3245	3253	3225	305
15°	3046	3066	3095	3114	3074	859
25°	2758	2792	2838	2849	2806	1271
35°	2388	2425	2482	2500	2459	1493
45°	1951	1986	2050	2051	2011	1505
55°	1480	1509	1549	1526	1501	1323
65°	984	1004	1021	1001	984	973
75°	488	499	510	492	481	519
85°	93	95	99	100	97	118
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3257.6	3257.6	3257.6	3257.6	3257.6
2.5°	3232.1	3242.7	3253.5	3258.3	3231.8
5°	3215.2	3221.3	3245.4	3252.8	3225.3
7.5°	3187.3	3196.5	3219.9	3223.3	3196.8
10°	3149.3	3165.6	3181.2	3198.2	3166.0
12.5°	3100.8	3122.8	3149.3	3152.4	3127.9
15°	3046.1	3066.5	3095.4	3114.0	3073.6
17.5°	2985.1	3004.7	3042.1	3045.5	3021.0
20°	2916.8	2941.3	2986.1	2993.9	2950.1
22.5°	2839.4	2872.4	2909.7	2917.2	2884.9
25°	2758.3	2792.3	2838.4	2849.0	2805.8
27.5°	2673.5	2706.1	2758.0	2765.5	2729.1
30°	2582.5	2613.1	2670.1	2682.6	2645.6
32.5°	2490.2	2520.7	2583.9	2594.4	2558.4
35°	2387.7	2425.0	2482.4	2499.7	2459.3
37.5°	2283.2	2319.5	2384.6	2400.3	2356.8
40°	2174.9	2210.9	2275.0	2287.9	2246.2
42.5°	2064.3	2100.2	2168.8	2170.8	2136.2
45°	1951.2	1985.8	2049.7	2051.4	2011.0
47.5°	1836.5	1871.5	1928.5	1922.0	1884.0
50°	1720.4	1753.7	1803.6	1790.7	1756.4
52.5°	1600.3	1632.5	1679.7	1658.7	1626.4
55°	1479.5	1509.3	1548.7	1526.3	1501.2
57.5°	1357.6	1387.8	1418.0	1395.3	1373.6
60°	1234.7	1261.2	1286.0	1262.9	1246.3
62.5°	1109.8	1132.6	1154.0	1131.9	1116.3
65°	983.6	1003.6	1021.3	1000.9	984.3
67.5°	858.0	875.0	891.3	870.2	852.9
70°	732.4	747.0	762.0	740.2	724.3
72.5°	608.6	621.4	634.7	613.6	599.7
75°	488.1	499.3	510.1	491.5	480.6
77.5°	373.0	382.5	390.0	378.1	367.6
80°	266.1	273.2	277.6	272.9	263.0
82.5°	171.1	176.2	178.5	178.2	171.7
85°	93.0	94.7	99.1	100.1	96.7
87.5°	36.0	38.4	39.4	42.4	39.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)