

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: P489666

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-3LO-40-120-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: P489666
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-LD4-3LO-40-120-EDD-90
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

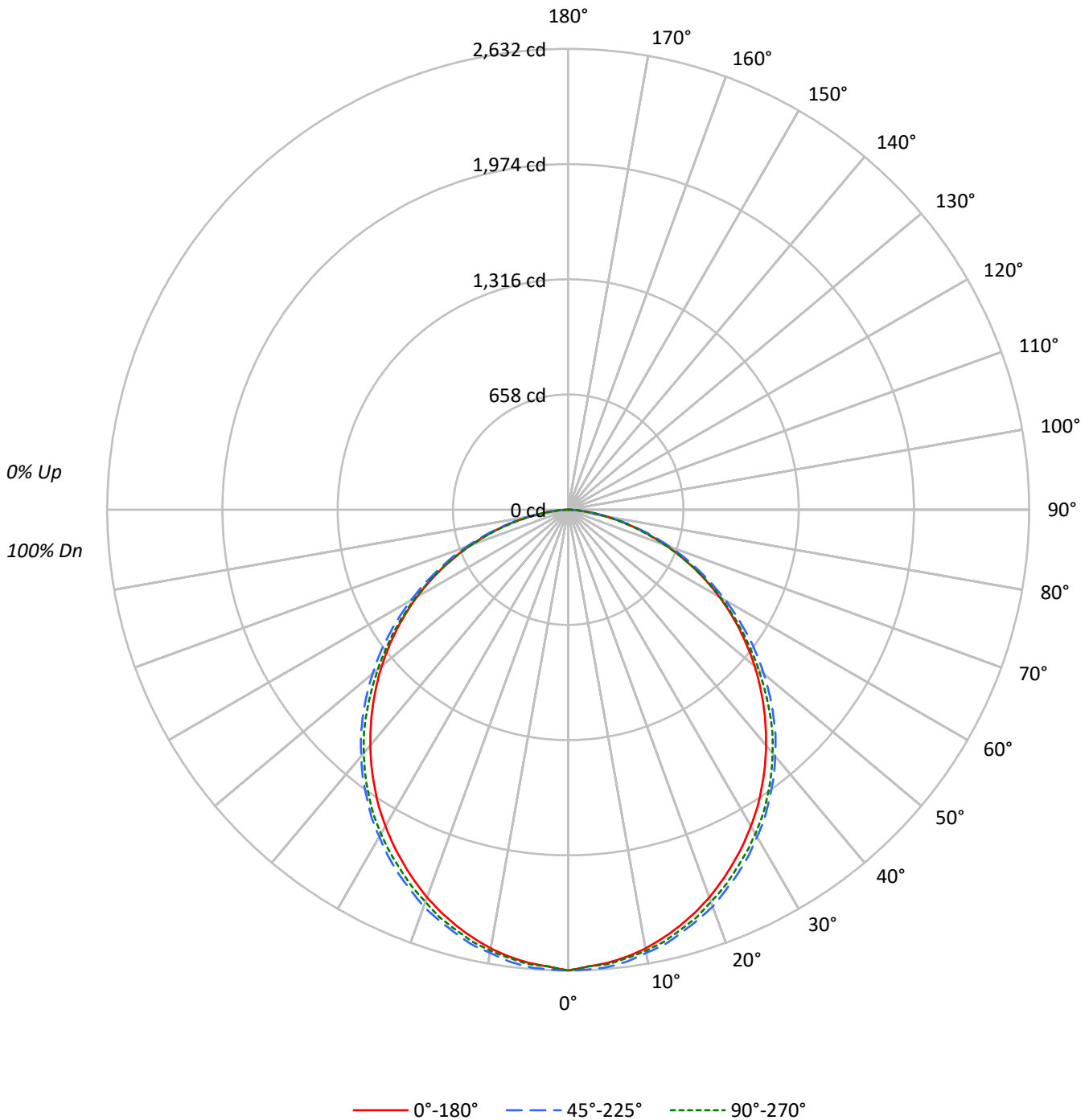
Lumens per Lamp: N/A
Luminaire Lumens: 6919.0 lumens
Efficiency: N/A
Efficacy: 98.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
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°	3541	3541	3541
5°	3508	3541	3519
10°	3476	3511	3494
15°	3428	3483	3459
20°	3374	3454	3413
25°	3308	3404	3365
30°	3242	3351	3321
35°	3168	3294	3263
40°	3086	3228	3187
45°	3000	3151	3091
50°	2909	3050	2970
55°	2804	2935	2845
60°	2684	2796	2710
65°	2530	2627	2532
70°	2328	2422	2302
75°	2050	2142	2019
80°	1666	1738	1647
85°	1159	1237	1206



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	247.9	3.6
10°-20°	702.4	10.2
20°-30°	1047.6	15.1
30°-40°	1241.4	17.9
40°-50°	1256.1	18.2
50°-60°	1097.0	15.9
60°-70°	801.6	11.6
70°-80°	426.5	6.2
80°-90°	98.6	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°	1997.8	28.9
0°-40°	3239.2	46.8
0°-60°	5592.3	80.8
0°-90°	6919.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6919.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2632	2632	2632	2632	2632	
5°	2598	2602	2622	2628	2606	246
15°	2461	2477	2501	2516	2483	694
25°	2228	2256	2293	2302	2267	1027
35°	1929	1959	2006	2020	1987	1206
45°	1576	1604	1656	1657	1625	1216
55°	1195	1219	1251	1233	1213	1068
65°	795	811	825	809	795	786
75°	394	403	412	397	388	419
85°	75	76	80	81	78	95
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2631.7	2631.7	2631.7	2631.7	2631.7
2.5°	2611.2	2619.7	2628.5	2632.3	2610.9
5°	2597.5	2602.4	2621.9	2627.9	2605.7
7.5°	2575.0	2582.4	2601.3	2604.0	2582.7
10°	2544.3	2557.4	2570.0	2583.8	2557.7
12.5°	2505.1	2522.9	2544.3	2546.7	2527.0
15°	2460.9	2477.4	2500.7	2515.8	2483.1
17.5°	2411.6	2427.5	2457.6	2460.4	2440.6
20°	2356.4	2376.2	2412.4	2418.7	2383.3
22.5°	2293.9	2320.5	2350.7	2356.7	2330.7
25°	2228.4	2255.8	2293.1	2301.6	2266.8
27.5°	2159.8	2186.2	2228.1	2234.2	2204.8
30°	2086.4	2111.0	2157.1	2167.3	2137.4
32.5°	2011.8	2036.5	2087.5	2096.0	2066.9
35°	1929.0	1959.1	2005.5	2019.5	1986.8
37.5°	1844.5	1873.9	1926.5	1939.1	1904.0
40°	1757.1	1786.1	1837.9	1848.4	1814.6
42.5°	1667.7	1696.7	1752.1	1753.8	1725.8
45°	1576.4	1604.3	1655.9	1657.2	1624.6
47.5°	1483.7	1511.9	1558.0	1552.8	1522.1
50°	1389.9	1416.8	1457.1	1446.7	1419.0
52.5°	1292.8	1318.9	1357.0	1340.0	1314.0
55°	1195.2	1219.4	1251.2	1233.1	1212.8
57.5°	1096.8	1121.2	1145.6	1127.2	1109.7
60°	997.5	1018.9	1038.9	1020.3	1006.9
62.5°	896.6	915.0	932.3	914.4	901.8
65°	794.6	810.8	825.1	808.6	795.2
67.5°	693.2	706.9	720.0	703.0	689.1
70°	591.7	603.5	615.6	598.0	585.1
72.5°	491.6	502.1	512.7	495.7	484.5
75°	394.3	403.3	412.1	397.0	388.3
77.5°	301.3	309.0	315.1	305.5	297.0
80°	215.0	220.7	224.3	220.5	212.5
82.5°	138.2	142.3	144.2	144.0	138.7
85°	75.1	76.5	80.1	80.9	78.1
87.5°	29.1	31.0	31.8	34.3	31.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)