

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: P489672

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-3STD-27-120-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: P489672
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-27-120-EDD-90
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

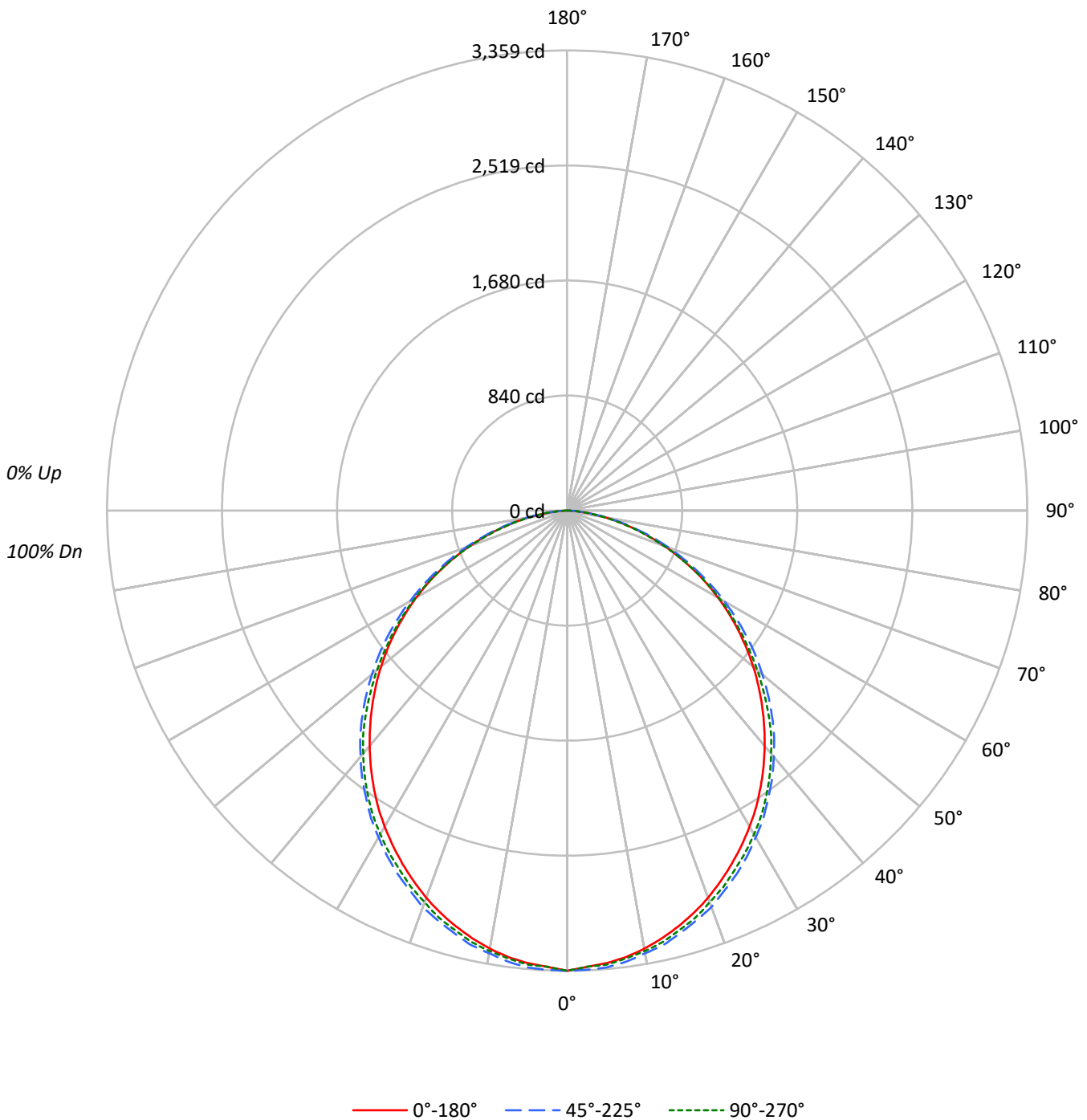
Lumens per Lamp: N/A
Luminaire Lumens: 8832.1 lumens
Efficiency: N/A
Efficacy: 88.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P489672

CATALOG NUMBER: CLM-24-4-INS-A19156-LD4-3STD-27-120-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P489672

CATALOG NUMBER: CLM-24-4-INS-A19156-LD4-3STD-27-120-EDD-90

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°	4520	4520	4520
5°	4478	4520	4492
10°	4437	4482	4461
15°	4376	4446	4415
20°	4307	4409	4356
25°	4223	4346	4296
30°	4138	4278	4239
35°	4044	4205	4166
40°	3939	4121	4069
45°	3829	4022	3946
50°	3714	3893	3791
55°	3579	3746	3632
60°	3426	3569	3458
65°	3229	3353	3231
70°	2971	3091	2938
75°	2616	2735	2576
80°	2126	2218	2102
85°	1480	1578	1541



TEST NUMBER: P489672

CATALOG NUMBER: CLM-24-4-INS-A19156-LD4-3STD-27-120-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	316.4	3.6
10°-20°	896.6	10.2
20°-30°	1337.2	15.1
30°-40°	1584.6	17.9
40°-50°	1603.4	18.2
50°-60°	1400.3	15.9
60°-70°	1023.3	11.6
70°-80°	544.5	6.2
80°-90°	125.9	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°	2550.2	28.9
0°-40°	4134.8	46.8
0°-60°	7138.5	80.8
0°-90°	8832.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8832.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3359	3359	3359	3359	3359	
5°	3316	3322	3347	3354	3326	314
15°	3141	3162	3192	3211	3170	886
25°	2844	2880	2927	2938	2894	1310
35°	2462	2501	2560	2578	2536	1540
45°	2012	2048	2114	2116	2074	1552
55°	1526	1556	1597	1574	1548	1364
65°	1014	1035	1053	1032	1015	1004
75°	503	515	526	507	496	535
85°	96	98	102	103	100	121
90°	0	0	0	0	0	



TEST NUMBER: P489672

CATALOG NUMBER: CLM-24-4-INS-A19156-LD4-3STD-27-120-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3359.4	3359.4	3359.4	3359.4	3359.4
2.5°	3333.2	3344.0	3355.2	3360.1	3332.8
5°	3315.7	3322.0	3346.8	3354.5	3326.2
7.5°	3287.0	3296.4	3320.6	3324.1	3296.8
10°	3247.8	3264.6	3280.7	3298.2	3264.9
12.5°	3197.7	3220.5	3247.8	3250.9	3225.7
15°	3141.4	3162.4	3192.1	3211.4	3169.7
17.5°	3078.4	3098.7	3137.2	3140.7	3115.5
20°	3008.0	3033.2	3079.4	3087.5	3042.3
22.5°	2928.2	2962.2	3000.7	3008.4	2975.1
25°	2844.5	2879.5	2927.2	2938.0	2893.6
27.5°	2757.0	2790.6	2844.2	2851.9	2814.4
30°	2663.2	2694.7	2753.5	2766.5	2728.3
32.5°	2568.0	2599.5	2664.6	2675.5	2638.4
35°	2462.3	2500.8	2560.0	2577.8	2536.2
37.5°	2354.5	2392.0	2459.2	2475.3	2430.5
40°	2242.9	2280.0	2346.1	2359.4	2316.4
42.5°	2128.8	2165.9	2236.6	2238.7	2203.0
45°	2012.2	2047.9	2113.7	2115.5	2073.8
47.5°	1893.9	1930.0	1988.8	1982.1	1942.9
50°	1774.2	1808.5	1860.0	1846.7	1811.3
52.5°	1650.3	1683.6	1732.2	1710.5	1677.3
55°	1525.7	1556.5	1597.1	1574.0	1548.1
57.5°	1400.0	1431.2	1462.4	1438.9	1416.5
60°	1273.3	1300.6	1326.2	1302.4	1285.2
62.5°	1144.5	1168.0	1190.0	1167.3	1151.2
65°	1014.3	1035.0	1053.2	1032.2	1015.0
67.5°	884.8	902.3	919.1	897.4	879.6
70°	755.3	770.4	785.8	763.4	746.9
72.5°	627.6	640.9	654.5	632.8	618.5
75°	503.3	514.9	526.1	506.8	495.6
77.5°	384.7	394.5	402.2	389.9	379.1
80°	274.4	281.8	286.3	281.4	271.3
82.5°	176.4	181.7	184.1	183.8	177.1
85°	95.9	97.7	102.2	103.3	99.8
87.5°	37.1	39.6	40.6	43.8	40.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)