

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: P489205

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-5STD-27-120-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: P489205
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-LD4-5STD-27-120-EDD
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

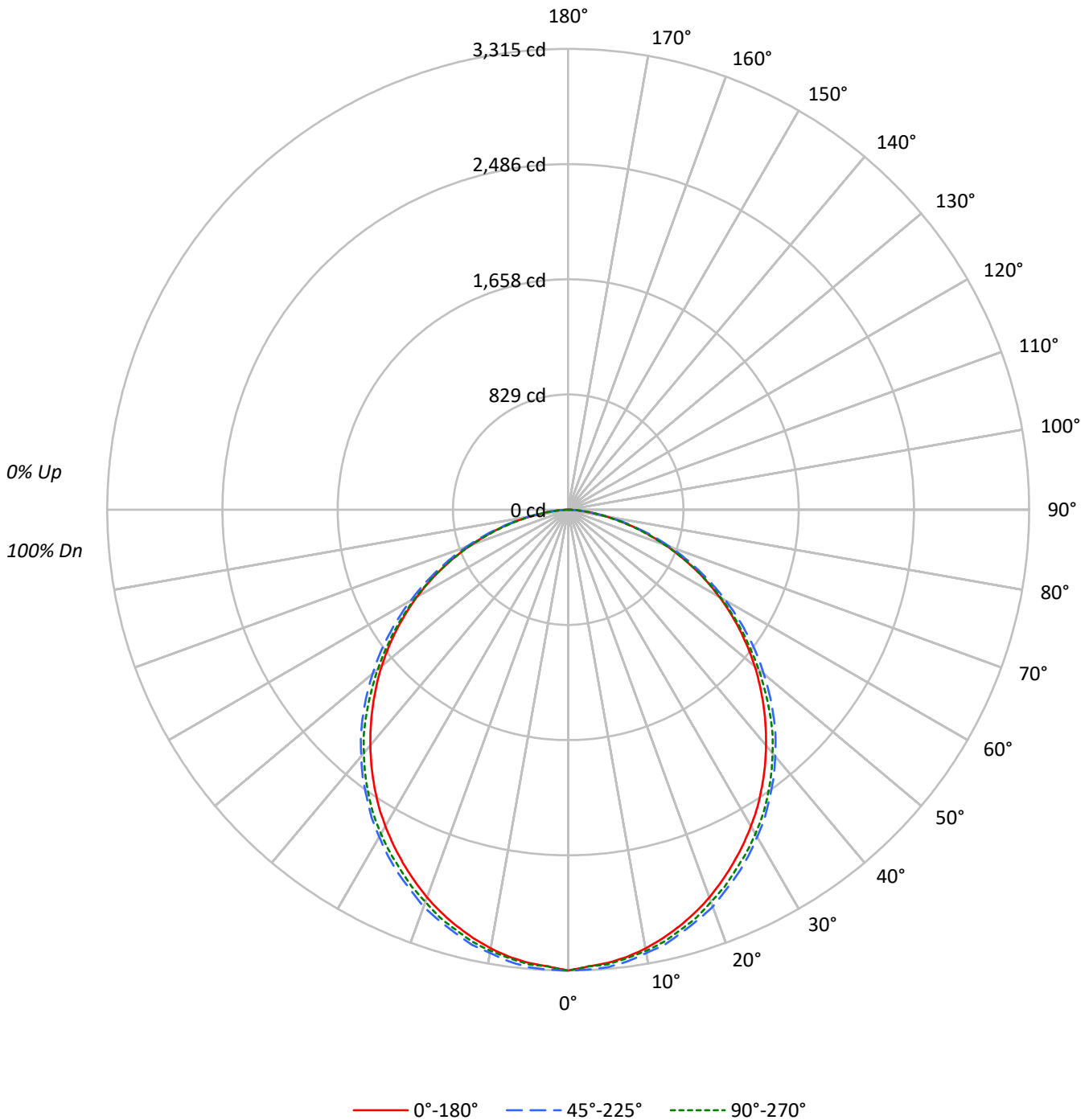
Lumens per Lamp: N/A
Luminaire Lumens: 8716.2 lumens
Efficiency: N/A
Efficacy: 104.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 83.2
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

TEST NUMBER: P489205

CATALOG NUMBER: CLM-24-2-INS-A19156-LD4-5STD-27-120-EDD

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	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°	8921	8921	8921
5°	8839	8922	8867
10°	8758	8847	8804
15°	8637	8776	8715
20°	8501	8703	8598
25°	8335	8577	8479
30°	8167	8444	8366
35°	7983	8299	8222
40°	7775	8133	8030
45°	7557	7939	7789
50°	7330	7685	7483
55°	7064	7394	7168
60°	6763	7044	6826
65°	6374	6618	6378
70°	5865	6102	5799
75°	5164	5398	5085
80°	4197	4379	4148
85°	2921	3115	3038



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	312.2	3.6
10°-20°	884.8	10.2
20°-30°	1319.7	15.1
30°-40°	1563.8	17.9
40°-50°	1582.3	18.2
50°-60°	1381.9	15.9
60°-70°	1009.9	11.6
70°-80°	537.3	6.2
80°-90°	124.2	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°	2516.7	28.9
0°-40°	4080.5	46.8
0°-60°	7044.8	80.8
0°-90°	8716.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8716.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3315	3315	3315	3315	3315	
5°	3272	3278	3303	3310	3282	310
15°	3100	3121	3150	3169	3128	874
25°	2807	2842	2889	2899	2856	1293
35°	2430	2468	2526	2544	2503	1520
45°	1986	2021	2086	2088	2047	1532
55°	1506	1536	1576	1553	1528	1346
65°	1001	1021	1039	1019	1002	991
75°	497	508	519	500	489	528
85°	95	96	101	102	98	120
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3315.3	3315.3	3315.3	3315.3	3315.3
2.5°	3289.4	3300.1	3311.2	3316.0	3289.1
5°	3272.2	3278.4	3302.9	3310.5	3282.5
7.5°	3243.8	3253.2	3277.0	3280.4	3253.5
10°	3205.1	3221.7	3237.6	3254.9	3222.1
12.5°	3155.7	3178.2	3205.1	3208.3	3183.4
15°	3100.1	3120.9	3150.2	3169.2	3128.1
17.5°	3038.0	3058.0	3096.0	3099.4	3074.6
20°	2968.5	2993.4	3039.0	3046.9	3002.4
22.5°	2889.8	2923.3	2961.3	2968.9	2936.1
25°	2807.2	2841.8	2888.7	2899.4	2855.6
27.5°	2720.9	2754.0	2806.9	2814.5	2777.5
30°	2628.3	2659.4	2717.4	2730.2	2692.5
32.5°	2534.3	2565.4	2629.7	2640.4	2603.8
35°	2430.0	2468.0	2526.4	2544.0	2502.9
37.5°	2323.6	2360.6	2426.9	2442.8	2398.6
40°	2213.4	2250.1	2315.3	2328.5	2286.0
42.5°	2100.8	2137.5	2207.2	2209.3	2174.1
45°	1985.8	2021.0	2086.0	2087.7	2046.6
47.5°	1869.1	1904.6	1962.7	1956.1	1917.4
50°	1750.9	1784.8	1835.6	1822.4	1787.5
52.5°	1628.7	1661.5	1709.5	1688.1	1655.2
55°	1505.7	1536.1	1576.1	1553.3	1527.8
57.5°	1381.7	1412.4	1443.2	1420.0	1397.9
60°	1256.6	1283.6	1308.8	1285.3	1268.4
62.5°	1129.5	1152.7	1174.4	1152.0	1136.1
65°	1001.0	1021.4	1039.4	1018.6	1001.7
67.5°	873.2	890.5	907.1	885.7	868.0
70°	745.4	760.3	775.5	753.4	737.1
72.5°	619.3	632.5	645.9	624.5	610.4
75°	496.7	508.1	519.2	500.2	489.1
77.5°	379.6	389.3	396.9	384.8	374.1
80°	270.8	278.1	282.6	277.7	267.7
82.5°	174.1	179.3	181.7	181.3	174.8
85°	94.6	96.4	100.9	101.9	98.4
87.5°	36.6	39.0	40.1	43.2	39.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)