

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: P489211

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-5STD-40-120-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: P489211
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-40-120-EDD
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

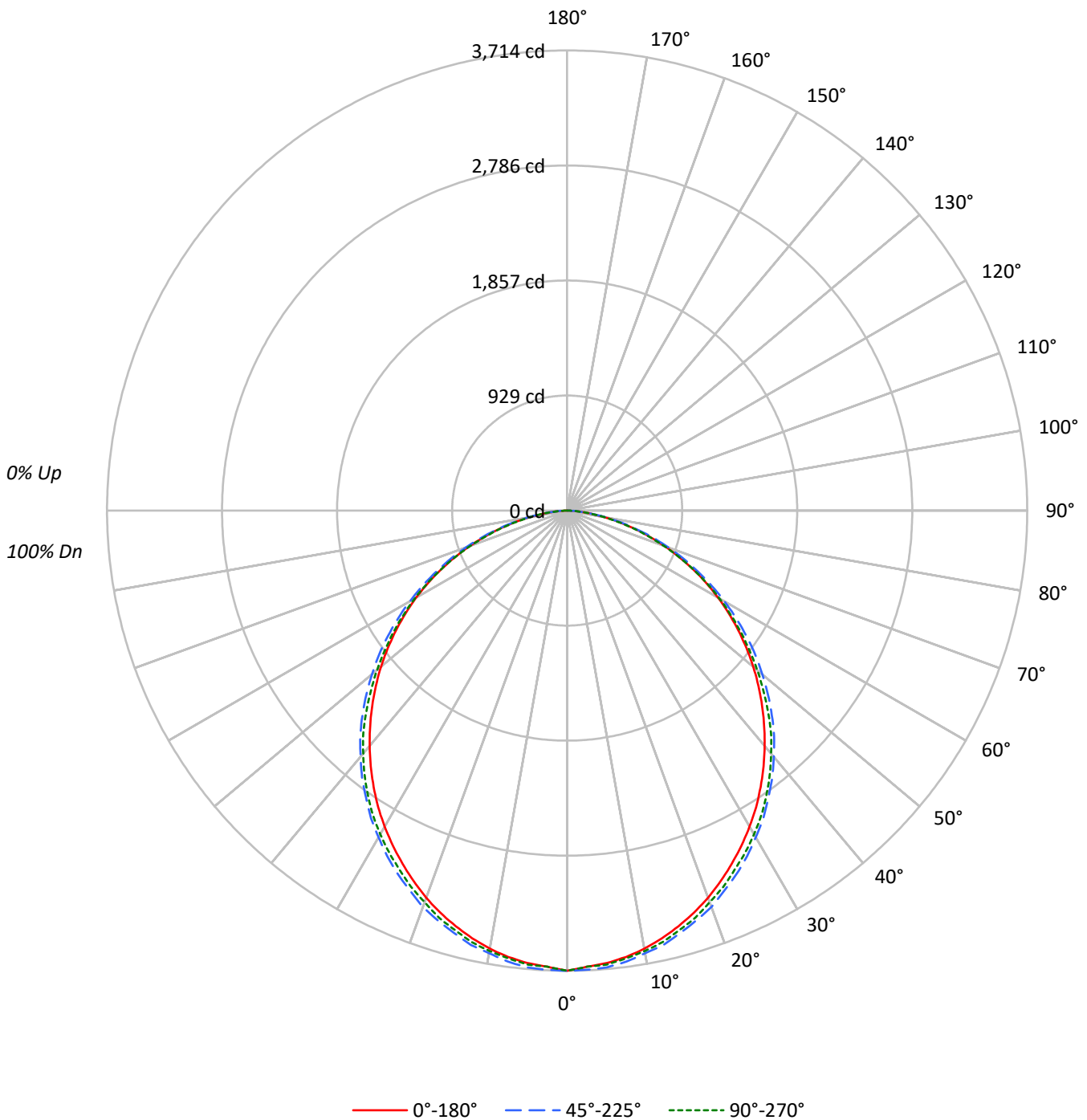
Lumens per Lamp: N/A
Luminaire Lumens: 9765.1 lumens
Efficiency: N/A
Efficacy: 117.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

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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	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°	9995	9995	9995
5°	9903	9996	9934
10°	9812	9911	9864
15°	9676	9832	9763
20°	9524	9750	9633
25°	9338	9609	9499
30°	9150	9460	9373
35°	8944	9298	9212
40°	8711	9112	8997
45°	8467	8894	8726
50°	8212	8609	8384
55°	7914	8284	8030
60°	7577	7892	7648
65°	7141	7414	7146
70°	6570	6836	6497
75°	5786	6047	5698
80°	4702	4906	4647
85°	3273	3489	3406



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	349.8	3.6
10°-20°	991.3	10.2
20°-30°	1478.5	15.1
30°-40°	1752.0	17.9
40°-50°	1772.8	18.2
50°-60°	1548.2	15.9
60°-70°	1131.4	11.6
70°-80°	602.0	6.2
80°-90°	139.1	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°	2819.6	28.9
0°-40°	4571.6	46.8
0°-60°	7892.6	80.8
0°-90°	9765.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9765.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3714	3714	3714	3714	3714	
5°	3666	3673	3700	3709	3678	348
15°	3473	3496	3529	3551	3504	979
25°	3145	3184	3236	3248	3199	1449
35°	2722	2765	2830	2850	2804	1703
45°	2225	2264	2337	2339	2293	1716
55°	1687	1721	1766	1740	1712	1508
65°	1122	1144	1164	1141	1122	1110
75°	556	569	582	560	548	592
85°	106	108	113	114	110	134
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3714.3	3714.3	3714.3	3714.3	3714.3
2.5°	3685.3	3697.3	3709.7	3715.1	3684.9
5°	3665.9	3672.9	3700.4	3708.9	3677.5
7.5°	3634.2	3644.6	3671.3	3675.2	3645.0
10°	3590.8	3609.4	3627.2	3646.6	3609.8
12.5°	3535.5	3560.7	3590.8	3594.3	3566.5
15°	3473.2	3496.4	3529.3	3550.6	3504.5
17.5°	3403.5	3426.0	3468.6	3472.4	3444.6
20°	3325.8	3353.6	3404.7	3413.6	3363.7
22.5°	3237.5	3275.1	3317.6	3326.1	3289.4
25°	3145.0	3183.7	3236.4	3248.4	3199.2
27.5°	3048.3	3085.4	3144.7	3153.2	3111.8
30°	2944.6	2979.4	3044.4	3058.7	3016.6
32.5°	2839.3	2874.1	2946.1	2958.1	2917.1
35°	2722.5	2765.0	2830.4	2850.2	2804.1
37.5°	2603.3	2644.7	2719.0	2736.8	2687.2
40°	2479.8	2520.8	2594.0	2608.7	2561.1
42.5°	2353.7	2394.7	2472.8	2475.2	2435.7
45°	2224.8	2264.3	2337.0	2338.9	2292.9
47.5°	2094.0	2133.8	2198.9	2191.5	2148.2
50°	1961.6	1999.6	2056.4	2041.7	2002.7
52.5°	1824.6	1861.4	1915.2	1891.2	1854.4
55°	1686.9	1720.9	1765.8	1740.3	1711.6
57.5°	1547.9	1582.4	1616.8	1590.9	1566.1
60°	1407.9	1438.0	1466.3	1440.0	1421.0
62.5°	1265.4	1291.4	1315.8	1290.6	1272.8
65°	1121.5	1144.3	1164.4	1141.2	1122.3
67.5°	978.3	997.7	1016.2	992.2	972.5
70°	835.1	851.8	868.8	844.0	825.8
72.5°	693.9	708.6	723.7	699.7	683.8
75°	556.5	569.3	581.6	560.4	548.0
77.5°	425.3	436.1	444.6	431.1	419.1
80°	303.4	311.5	316.6	311.1	299.9
82.5°	195.0	200.8	203.6	203.2	195.8
85°	106.0	108.0	113.0	114.2	110.3
87.5°	41.0	43.7	44.9	48.4	44.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)