

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: P489180

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-5HI-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: P489180
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-LD4-5HI-27-120-EDD-90
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

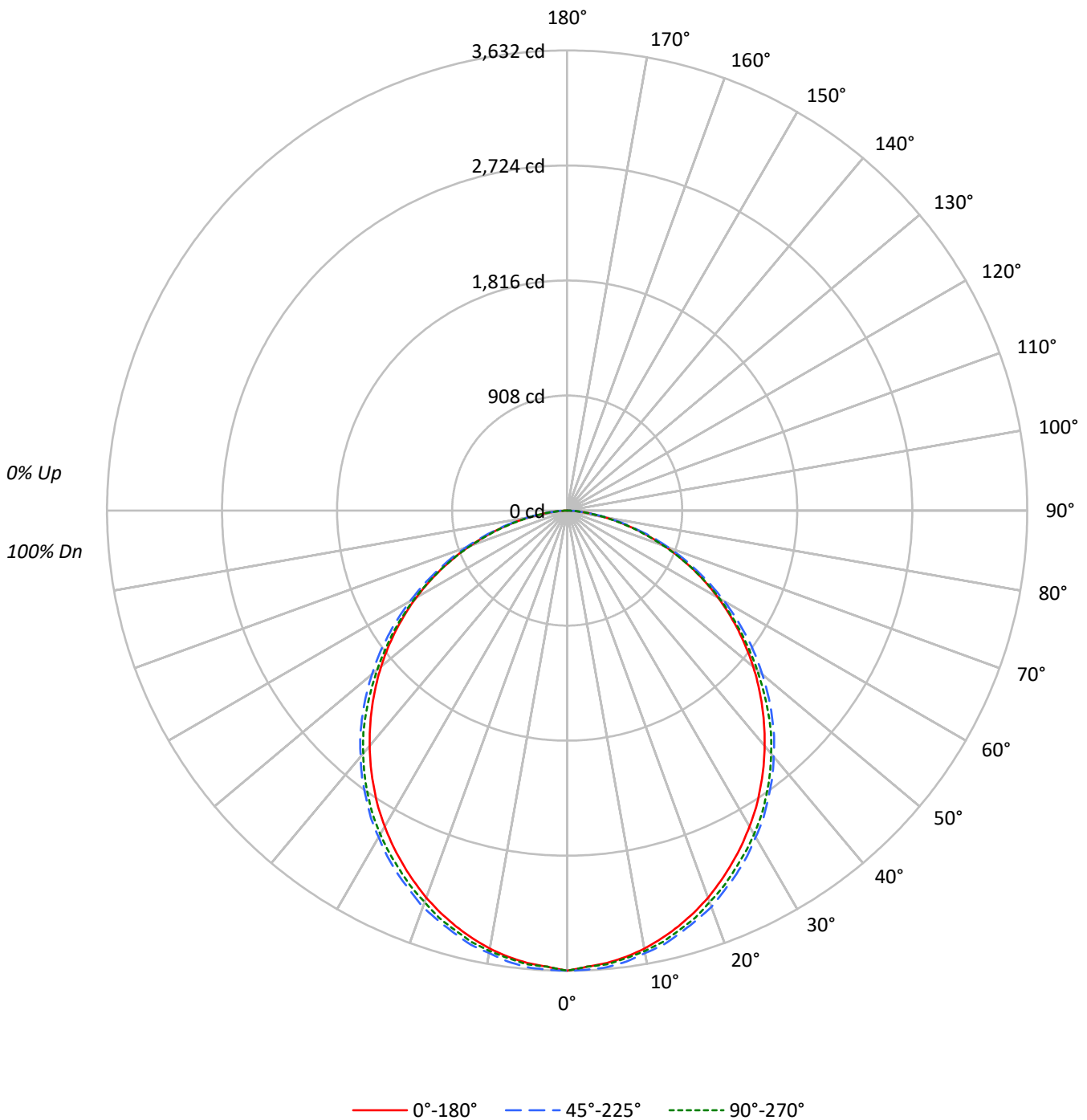
Lumens per Lamp: N/A
Luminaire Lumens: 9547.9 lumens
Efficiency: N/A
Efficacy: 88.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 108
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°	9773	9773	9773
5°	9682	9773	9713
10°	9594	9691	9644
15°	9461	9614	9546
20°	9312	9533	9418
25°	9130	9396	9288
30°	8946	9249	9165
35°	8745	9091	9007
40°	8518	8910	8796
45°	8278	8696	8532
50°	8030	8418	8197
55°	7738	8100	7852
60°	7408	7716	7478
65°	6982	7249	6987
70°	6424	6684	6353
75°	5657	5913	5571
80°	4596	4796	4544
85°	3202	3412	3328



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	342.0	3.6
10°-20°	969.2	10.2
20°-30°	1445.6	15.1
30°-40°	1713.0	17.9
40°-50°	1733.3	18.2
50°-60°	1513.8	15.9
60°-70°	1106.2	11.6
70°-80°	588.6	6.2
80°-90°	136.0	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°	2756.9	28.9
0°-40°	4469.9	46.8
0°-60°	7717.0	80.8
0°-90°	9547.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9547.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3632	3632	3632	3632	3632	
5°	3584	3591	3618	3626	3596	340
15°	3396	3419	3451	3472	3427	957
25°	3075	3113	3164	3176	3128	1417
35°	2662	2704	2768	2787	2742	1665
45°	2175	2214	2285	2287	2242	1678
55°	1649	1683	1726	1702	1674	1474
65°	1096	1119	1138	1116	1097	1085
75°	544	557	569	548	536	578
85°	104	106	110	112	108	131
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3631.7	3631.7	3631.7	3631.7	3631.7
2.5°	3603.3	3615.0	3627.1	3632.4	3602.9
5°	3584.4	3591.2	3618.1	3626.4	3595.7
7.5°	3553.4	3563.6	3589.7	3593.5	3564.0
10°	3511.0	3529.1	3546.5	3565.5	3529.5
12.5°	3456.9	3481.5	3511.0	3514.4	3487.1
15°	3396.0	3418.7	3450.8	3471.6	3426.6
17.5°	3327.8	3349.8	3391.4	3395.2	3368.0
20°	3251.8	3279.0	3329.0	3337.7	3288.9
22.5°	3165.5	3202.2	3243.8	3252.2	3216.2
25°	3075.1	3112.9	3164.4	3176.1	3128.1
27.5°	2980.5	3016.8	3074.7	3083.0	3042.5
30°	2879.1	2913.1	2976.7	2990.7	2949.5
32.5°	2776.2	2810.2	2880.6	2892.3	2852.2
35°	2661.9	2703.5	2767.5	2786.8	2741.7
37.5°	2545.4	2585.8	2658.5	2675.9	2627.5
40°	2424.7	2464.8	2536.3	2550.7	2504.1
42.5°	2301.3	2341.4	2417.8	2420.1	2381.5
45°	2175.3	2213.9	2285.0	2286.9	2241.9
47.5°	2047.4	2086.4	2149.9	2142.8	2100.4
50°	1918.0	1955.1	2010.7	1996.3	1958.1
52.5°	1784.1	1820.0	1872.6	1849.1	1813.2
55°	1649.4	1682.7	1726.5	1701.6	1673.6
57.5°	1513.5	1547.2	1580.9	1555.5	1531.3
60°	1376.5	1406.1	1433.7	1407.9	1389.4
62.5°	1237.3	1262.7	1286.5	1261.9	1244.5
65°	1096.5	1118.9	1138.5	1115.8	1097.3
67.5°	956.5	975.5	993.6	970.2	950.9
70°	816.5	832.8	849.5	825.2	807.5
72.5°	678.4	692.8	707.6	684.1	668.6
75°	544.1	556.6	568.7	547.9	535.8
77.5°	415.8	426.4	434.8	421.5	409.8
80°	296.6	304.6	309.5	304.2	293.2
82.5°	190.7	196.4	199.0	198.6	191.5
85°	103.7	105.6	110.5	111.6	107.8
87.5°	40.1	42.8	43.9	47.3	43.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)