

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: P489147

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-4HI-30-120-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: P489147
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-LD4-4HI-30-120-EDD
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

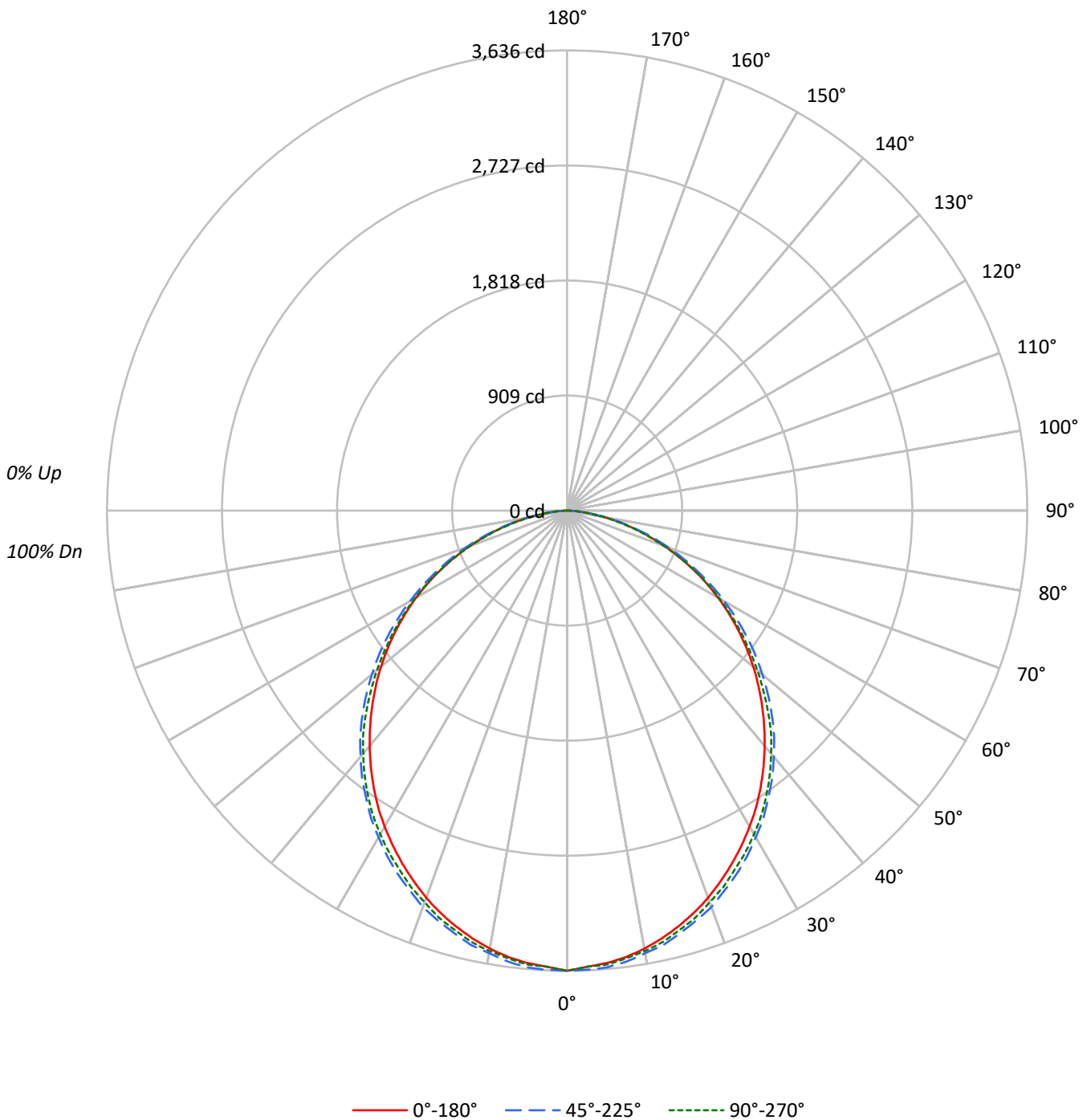
Lumens per Lamp: N/A
Luminaire Lumens: 9560.3 lumens
Efficiency: N/A
Efficacy: 110.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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°	9785	9785	9785
5°	9695	9786	9726
10°	9606	9704	9657
15°	9473	9626	9559
20°	9324	9546	9430
25°	9142	9408	9300
30°	8958	9262	9177
35°	8756	9103	9019
40°	8528	8921	8808
45°	8289	8707	8543
50°	8040	8429	8208
55°	7748	8111	7862
60°	7418	7726	7487
65°	6991	7259	6996
70°	6433	6692	6361
75°	5664	5920	5578
80°	4603	4802	4550
85°	3205	3415	3335



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	342.5	3.6
10°-20°	970.5	10.2
20°-30°	1447.5	15.1
30°-40°	1715.3	17.9
40°-50°	1735.6	18.2
50°-60°	1515.8	15.9
60°-70°	1107.7	11.6
70°-80°	589.4	6.2
80°-90°	136.2	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
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0°-30°	2760.4	28.9
0°-40°	4475.7	46.8
0°-60°	7727.1	80.8
0°-90°	9560.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9560.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3636	3636	3636	3636	3636	
5°	3589	3596	3623	3631	3600	340
15°	3400	3423	3455	3476	3431	959
25°	3079	3117	3168	3180	3132	1419
35°	2665	2707	2771	2790	2745	1667
45°	2178	2217	2288	2290	2245	1680
55°	1652	1685	1729	1704	1676	1476
65°	1098	1120	1140	1117	1099	1087
75°	545	557	569	549	536	579
85°	104	106	111	112	108	131
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3636.4	3636.4	3636.4	3636.4	3636.4
2.5°	3608.0	3619.7	3631.9	3637.2	3607.6
5°	3589.0	3595.9	3622.8	3631.1	3600.4
7.5°	3558.0	3568.2	3594.3	3598.1	3568.6
10°	3515.5	3533.7	3551.2	3570.1	3534.1
12.5°	3461.4	3486.0	3515.5	3518.9	3491.7
15°	3400.4	3423.1	3455.3	3476.1	3431.1
17.5°	3332.2	3354.1	3395.8	3399.6	3372.3
20°	3256.0	3283.3	3333.3	3342.0	3293.1
22.5°	3169.6	3206.4	3248.1	3256.4	3220.4
25°	3079.1	3117.0	3168.5	3180.2	3132.1
27.5°	2984.4	3020.7	3078.7	3087.0	3046.5
30°	2882.8	2916.9	2980.6	2994.6	2953.3
32.5°	2779.8	2813.9	2884.3	2896.1	2855.9
35°	2665.4	2707.0	2771.1	2790.4	2745.3
37.5°	2548.7	2589.2	2661.9	2679.4	2630.9
40°	2427.8	2468.0	2539.6	2554.0	2507.4
42.5°	2304.3	2344.4	2421.0	2423.3	2384.6
45°	2178.1	2216.8	2288.0	2289.9	2244.8
47.5°	2050.1	2089.1	2152.7	2145.5	2103.1
50°	1920.5	1957.6	2013.3	1998.9	1960.7
52.5°	1786.4	1822.4	1875.0	1851.5	1815.5
55°	1651.5	1684.8	1728.8	1703.8	1675.7
57.5°	1515.5	1549.2	1582.9	1557.5	1533.3
60°	1378.3	1407.9	1435.5	1409.8	1391.2
62.5°	1238.9	1264.3	1288.2	1263.5	1246.1
65°	1098.0	1120.3	1140.0	1117.3	1098.7
67.5°	957.8	976.7	994.9	971.4	952.1
70°	817.6	833.9	850.6	826.3	808.5
72.5°	679.3	693.7	708.5	685.0	669.5
75°	544.8	557.3	569.4	548.6	536.5
77.5°	416.4	427.0	435.3	422.1	410.3
80°	297.0	305.0	309.9	304.6	293.6
82.5°	191.0	196.6	199.3	198.9	191.7
85°	103.8	105.7	110.6	111.8	108.0
87.5°	40.2	42.8	43.9	47.4	43.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)