

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: P488664

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-1STD-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: P488664
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-12-4-INS-A19156-LD4-1STD-27-120-EDD-90
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

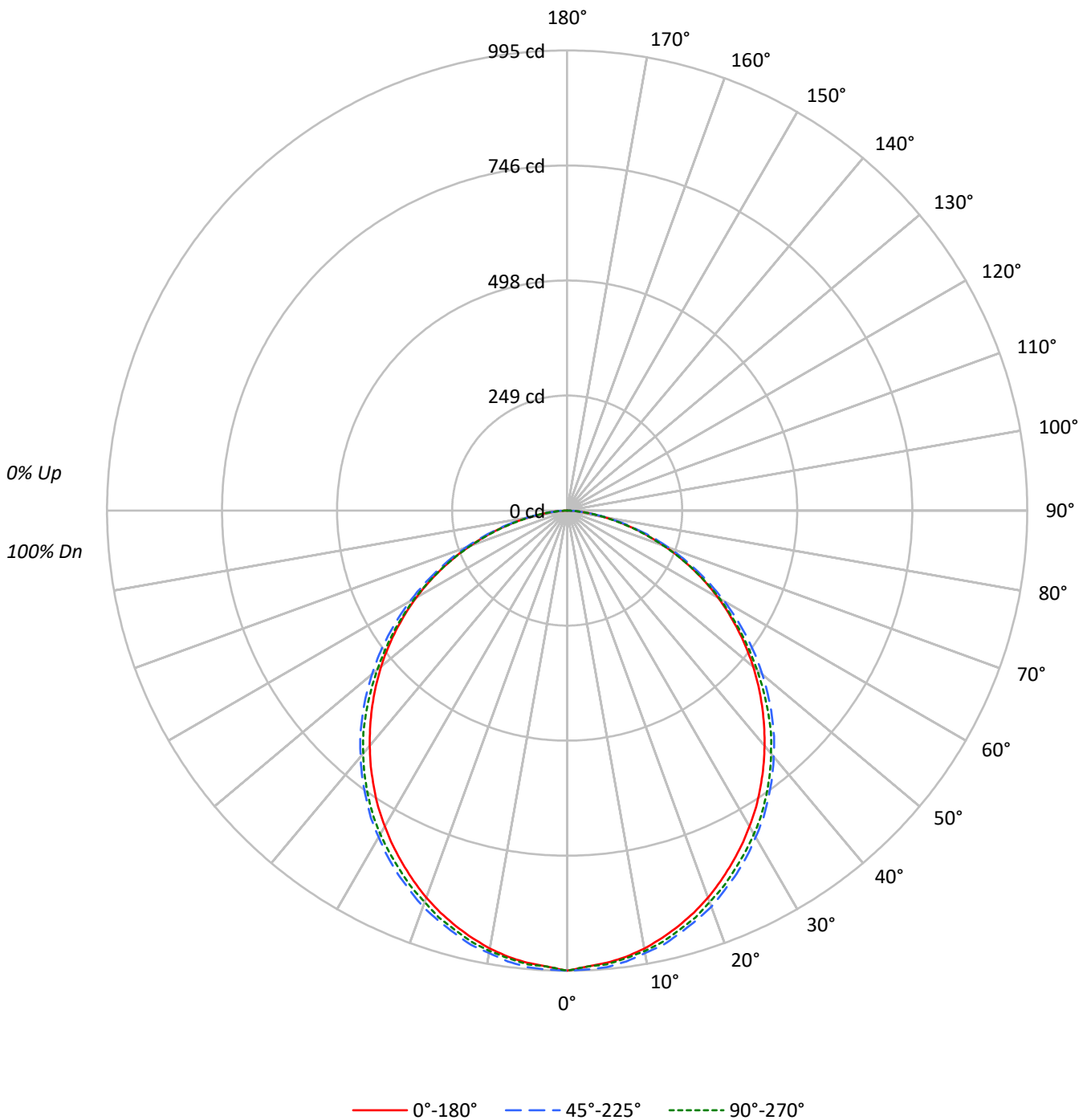
Lumens per Lamp: N/A
Luminaire Lumens: 2615.1 lumens
Efficiency: N/A
Efficacy: 78.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
Input Voltage (V): NR
Input Current (A_{in}): 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°	2677	2677	2677
5°	2652	2677	2660
10°	2628	2654	2641
15°	2591	2633	2615
20°	2550	2611	2580
25°	2501	2573	2544
30°	2450	2533	2510
35°	2395	2490	2467
40°	2333	2440	2409
45°	2267	2382	2337
50°	2199	2305	2245
55°	2119	2219	2151
60°	2029	2113	2048
65°	1912	1985	1913
70°	1759	1831	1740
75°	1549	1620	1525
80°	1260	1314	1244
85°	877	936	911



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.7	3.6
10°-20°	265.5	10.2
20°-30°	395.9	15.1
30°-40°	469.2	17.9
40°-50°	474.8	18.2
50°-60°	414.6	15.9
60°-70°	303.0	11.6
70°-80°	161.2	6.2
80°-90°	37.3	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°	755.1	28.9
0°-40°	1224.3	46.8
0°-60°	2113.6	80.8
0°-90°	2615.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2615.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	995	995	995	995	995	
5°	982	984	991	993	985	93
15°	930	936	945	951	938	262
25°	842	853	867	870	857	388
35°	729	740	758	763	751	456
45°	596	606	626	626	614	460
55°	452	461	473	466	458	404
65°	300	306	312	306	300	297
75°	149	152	156	150	147	158
85°	28	29	30	31	30	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	994.7	994.7	994.7	994.7	994.7
2.5°	986.9	990.1	993.4	994.9	986.8
5°	981.7	983.6	991.0	993.2	984.8
7.5°	973.2	976.0	983.2	984.2	976.1
10°	961.6	966.6	971.4	976.6	966.7
12.5°	946.8	953.5	961.6	962.6	955.1
15°	930.1	936.3	945.2	950.9	938.5
17.5°	911.5	917.5	928.9	929.9	922.5
20°	890.6	898.1	911.8	914.2	900.8
22.5°	867.0	877.1	888.5	890.7	880.9
25°	842.2	852.6	866.7	869.9	856.8
27.5°	816.3	826.3	842.1	844.4	833.3
30°	788.6	797.9	815.3	819.1	807.8
32.5°	760.4	769.7	789.0	792.2	781.2
35°	729.1	740.5	758.0	763.3	750.9
37.5°	697.2	708.2	728.1	732.9	719.6
40°	664.1	675.1	694.7	698.6	685.9
42.5°	630.3	641.3	662.2	662.9	652.3
45°	595.8	606.4	625.9	626.4	614.0
47.5°	560.8	571.4	588.9	586.9	575.3
50°	525.3	535.5	550.7	546.8	536.3
52.5°	488.6	498.5	512.9	506.5	496.6
55°	451.7	460.9	472.9	466.0	458.4
57.5°	414.5	423.8	433.0	426.0	419.4
60°	377.0	385.1	392.7	385.6	380.5
62.5°	338.9	345.8	352.4	345.6	340.9
65°	300.3	306.4	311.8	305.6	300.5
67.5°	262.0	267.2	272.1	265.7	260.4
70°	223.6	228.1	232.7	226.0	221.2
72.5°	185.8	189.8	193.8	187.4	183.1
75°	149.0	152.4	155.8	150.1	146.7
77.5°	113.9	116.8	119.1	115.4	112.2
80°	81.3	83.4	84.8	83.3	80.3
82.5°	52.2	53.8	54.5	54.4	52.4
85°	28.4	28.9	30.3	30.6	29.5
87.5°	11.0	11.7	12.0	13.0	11.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)