

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: P488738

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-3STD-30-120-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: P488738  
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-LD4-3STD-30-120-EDD-90  
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

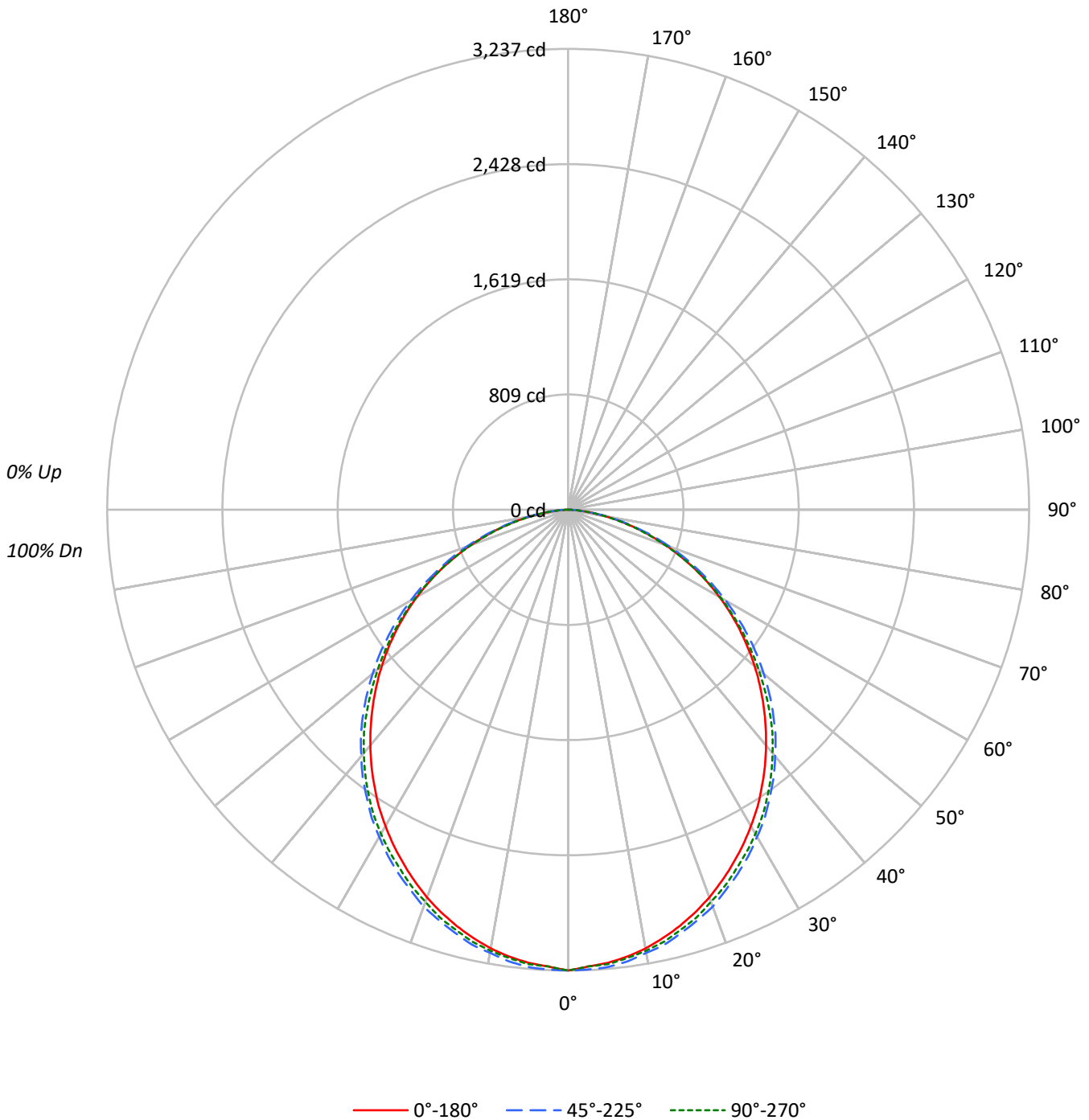
Lumens per Lamp: N/A  
Luminaire Lumens: 8509.9 lumens  
Efficiency: N/A  
Efficacy: 85.2 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 99.9  
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°	8710	8710	8710
5°	8630	8711	8657
10°	8551	8637	8596
15°	8432	8569	8508
20°	8300	8497	8394
25°	8138	8374	8278
30°	7974	8244	8168
35°	7794	8103	8028
40°	7592	7941	7840
45°	7378	7751	7604
50°	7157	7502	7306
55°	6897	7219	6998
60°	6603	6877	6665
65°	6223	6462	6227
70°	5726	5957	5663
75°	5043	5270	4965
80°	4097	4276	4051
85°	2853	3041	2967



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	304.8	3.6
10°-20°	863.9	10.2
20°-30°	1288.4	15.1
30°-40°	1526.8	17.9
40°-50°	1544.9	18.2
50°-60°	1349.2	15.9
60°-70°	986.0	11.6
70°-80°	524.6	6.2
80°-90°	121.3	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°	2457.2	28.9
0°-40°	3984.0	46.8
0°-60°	6878.1	80.8
0°-90°	8509.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8509.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3237	3237	3237	3237	3237	
5°	3195	3201	3225	3232	3205	303
15°	3027	3047	3076	3094	3054	853
25°	2741	2774	2820	2831	2788	1263
35°	2372	2410	2467	2484	2444	1484
45°	1939	1973	2037	2038	1998	1496
55°	1470	1500	1539	1517	1492	1314
65°	977	997	1015	994	978	967
75°	485	496	507	488	478	516
85°	92	94	98	100	96	117
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3236.9	3236.9	3236.9	3236.9	3236.9
2.5°	3211.6	3222.0	3232.8	3237.5	3211.2
5°	3194.7	3200.8	3224.7	3232.1	3204.8
7.5°	3167.1	3176.2	3199.4	3202.8	3176.5
10°	3129.3	3145.5	3161.0	3177.8	3145.8
12.5°	3081.1	3103.0	3129.3	3132.3	3108.0
15°	3026.8	3047.0	3075.7	3094.2	3054.1
17.5°	2966.1	2985.6	3022.7	3026.1	3001.8
20°	2898.3	2922.6	2967.1	2974.8	2931.3
22.5°	2821.4	2854.1	2891.2	2898.6	2866.6
25°	2740.8	2774.5	2820.4	2830.8	2788.0
27.5°	2656.5	2688.8	2740.4	2747.9	2711.8
30°	2566.1	2596.4	2653.1	2665.6	2628.8
32.5°	2474.4	2504.7	2567.4	2577.9	2542.1
35°	2372.5	2409.6	2466.6	2483.8	2443.7
37.5°	2268.6	2304.7	2369.5	2385.0	2341.8
40°	2161.1	2196.8	2260.5	2273.4	2231.9
42.5°	2051.1	2086.9	2155.0	2157.0	2122.6
45°	1938.8	1973.2	2036.6	2038.3	1998.2
47.5°	1824.8	1859.6	1916.2	1909.8	1872.0
50°	1709.5	1742.5	1792.1	1779.3	1745.2
52.5°	1590.1	1622.1	1669.0	1648.1	1616.1
55°	1470.0	1499.7	1538.8	1516.6	1491.6
57.5°	1349.0	1379.0	1409.0	1386.4	1364.8
60°	1226.9	1253.2	1277.8	1254.9	1238.4
62.5°	1102.8	1125.4	1146.6	1124.7	1109.2
65°	977.3	997.2	1014.8	994.5	978.0
67.5°	852.6	869.4	885.6	864.7	847.5
70°	727.8	742.3	757.1	735.5	719.7
72.5°	604.7	617.5	630.6	609.7	595.9
75°	485.0	496.1	506.9	488.3	477.5
77.5°	370.6	380.1	387.5	375.7	365.2
80°	264.4	271.5	275.9	271.1	261.4
82.5°	170.0	175.0	177.4	177.1	170.6
85°	92.4	94.1	98.5	99.5	96.1
87.5°	35.7	38.1	39.1	42.2	38.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)