

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: P489734

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-5LO-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: P489734  
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-24-4-INS-A19156-LD4-5LO-30-120-EDD-90  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

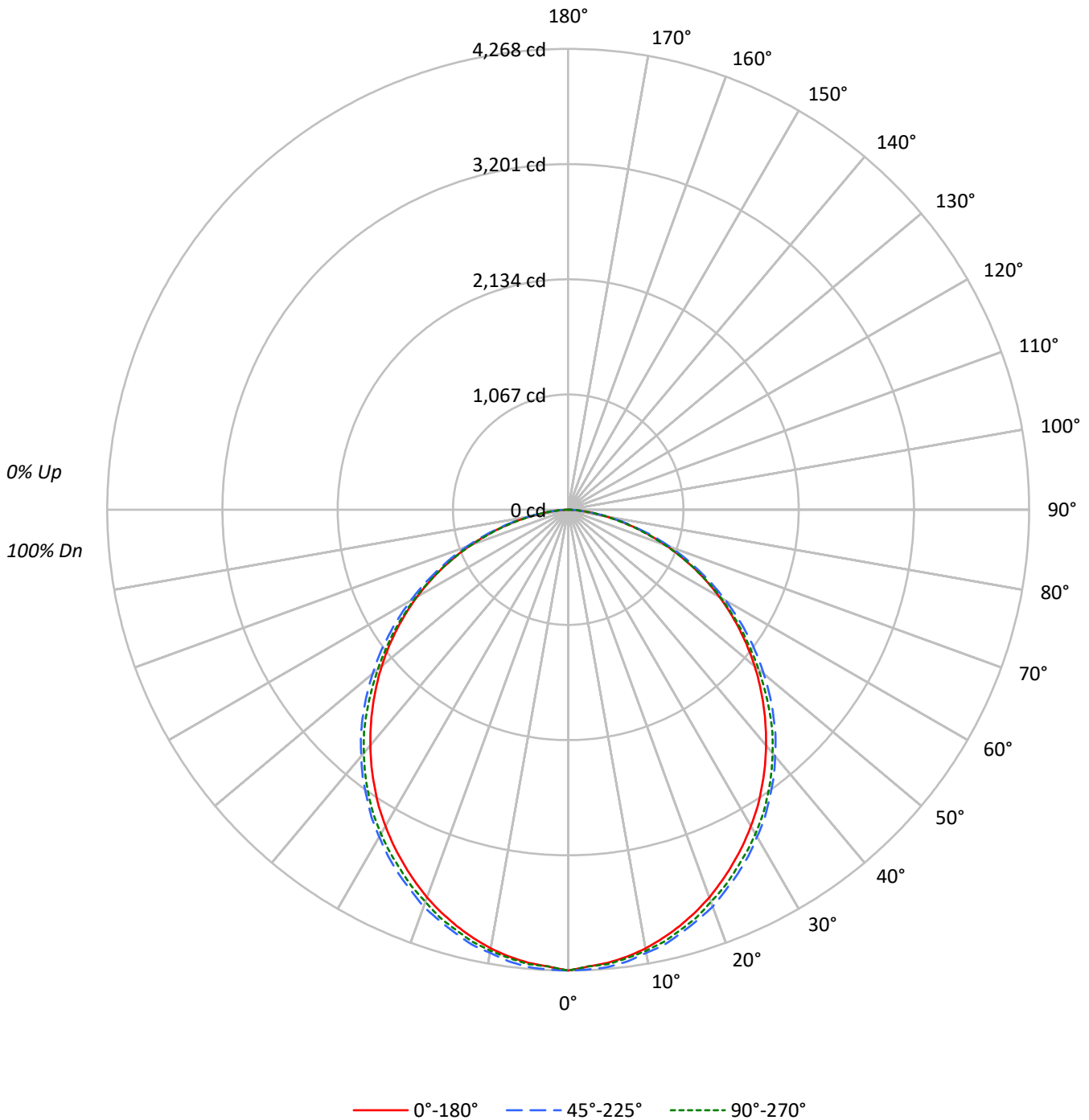
Lumens per Lamp: N/A  
Luminaire Lumens: 11220.4 lumens  
Efficiency: N/A  
Efficacy: 95.9 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 117  
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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	109	105	100	97	106	102	98	95	98	95	92	94	92	89	91	88	87	85					85			
2	99	91	85	79	97	90	83	78	86	81	76	83	78	75	80	76	73	71					71			
3	91	80	72	66	88	79	71	65	76	70	64	73	68	63	71	66	62	60					60			
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51					51			
5	77	64	55	48	75	63	54	48	61	53	48	59	52	47	57	51	47	45					45			
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39					39			
7	66	52	44	38	64	51	43	37	50	43	37	49	42	37	47	41	37	35					35			
8	61	48	39	34	60	47	39	33	46	38	33	45	38	33	43	37	33	31					31			
9	57	44	36	30	56	43	35	30	42	35	30	41	35	30	40	34	30	28					28			
10	54	41	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25					25			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	5742	5742	5742
5°	5689	5743	5707
10°	5637	5694	5667
15°	5559	5649	5609
20°	5472	5602	5534
25°	5365	5521	5457
30°	5257	5435	5385
35°	5138	5342	5292
40°	5005	5235	5169
45°	4864	5110	5013
50°	4718	4946	4817
55°	4547	4760	4613
60°	4353	4534	4394
65°	4103	4260	4105
70°	3775	3927	3733
75°	3324	3474	3273
80°	2701	2818	2670
85°	1880	2004	1956



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	401.9	3.6
10°-20°	1139.0	10.2
20°-30°	1698.8	15.1
30°-40°	2013.1	17.9
40°-50°	2037.0	18.2
50°-60°	1779.0	15.9
60°-70°	1300.0	11.6
70°-80°	691.7	6.2
80°-90°	159.9	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°	3239.8	28.9
0°-40°	5252.9	46.8
0°-60°	9068.8	80.8
0°-90°	11220.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11220.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4268	4268	4268	4268	4268	
5°	4212	4220	4252	4262	4226	399
15°	3991	4018	4055	4080	4027	1125
25°	3614	3658	3719	3732	3676	1665
35°	3128	3177	3252	3275	3222	1956
45°	2556	2602	2685	2688	2635	1972
55°	1938	1977	2029	2000	1967	1733
65°	1289	1315	1338	1311	1290	1275
75°	639	654	668	644	630	680
85°	122	124	130	131	127	154
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4267.8	4267.8	4267.8	4267.8	4267.8
2.5°	4234.5	4248.3	4262.5	4268.7	4234.0
5°	4212.3	4220.3	4251.8	4261.6	4225.6
7.5°	4175.8	4187.8	4218.5	4222.9	4188.2
10°	4126.0	4147.3	4167.8	4190.0	4147.8
12.5°	4062.4	4091.3	4126.0	4130.0	4098.0
15°	3990.8	4017.5	4055.3	4079.7	4026.8
17.5°	3910.8	3936.6	3985.5	3989.9	3957.9
20°	3821.4	3853.4	3912.1	3922.3	3865.0
22.5°	3720.0	3763.2	3812.1	3821.8	3779.6
25°	3613.7	3658.2	3718.7	3732.5	3676.0
27.5°	3502.6	3545.3	3613.3	3623.1	3575.5
30°	3383.4	3423.4	3498.1	3514.6	3466.1
32.5°	3262.5	3302.5	3385.2	3399.0	3351.8
35°	3128.2	3177.1	3252.2	3274.9	3222.0
37.5°	2991.2	3038.8	3124.2	3144.6	3087.7
40°	2849.4	2896.5	2980.6	2997.4	2942.8
42.5°	2704.4	2751.6	2841.4	2844.0	2798.7
45°	2556.3	2601.7	2685.3	2687.5	2634.6
47.5°	2406.1	2451.9	2526.6	2518.1	2468.3
50°	2254.0	2297.6	2362.9	2346.0	2301.1
52.5°	2096.6	2138.8	2200.6	2173.1	2130.8
55°	1938.3	1977.4	2029.0	1999.6	1966.7
57.5°	1778.6	1818.2	1857.8	1828.0	1799.5
60°	1617.7	1652.4	1684.8	1654.6	1632.8
62.5°	1454.0	1483.8	1511.8	1482.9	1462.5
65°	1288.6	1314.9	1338.0	1311.3	1289.5
67.5°	1124.1	1146.3	1167.7	1140.1	1117.4
70°	959.6	978.7	998.3	969.8	948.9
72.5°	797.3	814.2	831.5	803.9	785.7
75°	639.4	654.1	668.3	643.9	629.6
77.5°	488.7	501.1	510.9	495.4	481.6
80°	348.6	358.0	363.7	357.5	344.6
82.5°	224.1	230.8	233.9	233.4	225.0
85°	121.8	124.1	129.8	131.2	126.7
87.5°	47.1	50.2	51.6	55.6	51.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)