

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: P489733

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-5LO-27-120-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: P489733  
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-27-120-EDD  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

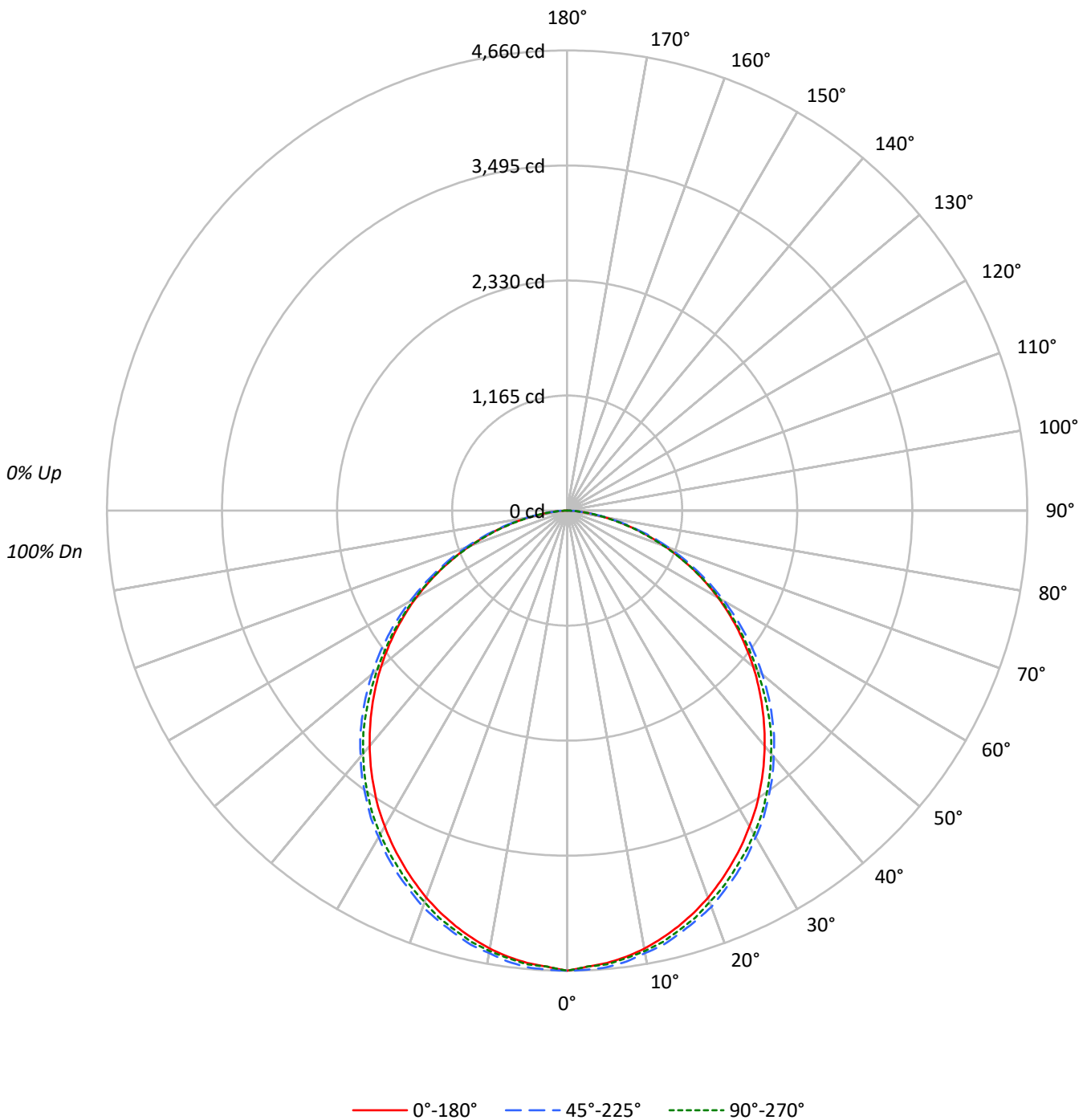
Lumens per Lamp: N/A  
Luminaire Lumens: 12250.2 lumens  
Efficiency: N/A  
Efficacy: 104.7 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

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°	6269	6269	6269
5°	6211	6270	6231
10°	6155	6217	6187
15°	6069	6167	6124
20°	5974	6116	6042
25°	5857	6027	5958
30°	5739	5934	5879
35°	5610	5832	5778
40°	5464	5716	5643
45°	5311	5579	5473
50°	5151	5400	5259
55°	4964	5196	5037
60°	4753	4950	4797
65°	4479	4651	4482
70°	4121	4288	4076
75°	3629	3793	3573
80°	2949	3077	2915
85°	2053	2189	2137



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	438.8	3.6
10°-20°	1243.6	10.2
20°-30°	1854.7	15.1
30°-40°	2197.9	17.9
40°-50°	2223.9	18.2
50°-60°	1942.3	15.9
60°-70°	1419.3	11.6
70°-80°	755.2	6.2
80°-90°	174.6	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°	3537.1	28.9
0°-40°	5735.0	46.8
0°-60°	9901.2	80.8
0°-90°	12250.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12250.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4660	4660	4660	4660	4660	
5°	4599	4608	4642	4653	4613	436
15°	4357	4386	4428	4454	4396	1228
25°	3945	3994	4060	4075	4013	1818
35°	3415	3469	3551	3576	3518	2136
45°	2791	2840	2932	2934	2876	2153
55°	2116	2159	2215	2183	2147	1892
65°	1407	1436	1461	1432	1408	1392
75°	698	714	730	703	687	742
85°	133	135	142	143	138	168
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4659.5	4659.5	4659.5	4659.5	4659.5
2.5°	4623.1	4638.2	4653.7	4660.5	4622.6
5°	4598.9	4607.6	4642.1	4652.7	4613.4
7.5°	4559.0	4572.2	4605.7	4610.5	4572.6
10°	4504.7	4528.0	4550.3	4574.6	4528.5
12.5°	4435.3	4466.8	4504.7	4509.0	4474.1
15°	4357.1	4386.2	4427.5	4454.2	4396.4
17.5°	4269.7	4297.9	4351.3	4356.1	4321.2
20°	4172.1	4207.1	4271.2	4282.3	4219.7
22.5°	4061.4	4108.5	4161.9	4172.6	4126.5
25°	3945.4	3994.0	4060.0	4075.0	4013.4
27.5°	3824.0	3870.7	3944.9	3955.6	3903.7
30°	3693.9	3737.6	3819.2	3837.2	3784.2
32.5°	3561.9	3605.6	3695.9	3710.9	3659.5
35°	3415.3	3468.7	3550.7	3575.5	3517.7
37.5°	3265.8	3317.7	3410.9	3433.2	3371.1
40°	3110.9	3162.4	3254.1	3272.6	3212.8
42.5°	2952.6	3004.1	3102.2	3105.1	3055.5
45°	2791.0	2840.5	2931.8	2934.2	2876.4
47.5°	2626.9	2676.9	2758.4	2749.2	2694.8
50°	2460.8	2508.4	2579.8	2561.3	2512.3
52.5°	2289.0	2335.1	2402.6	2372.5	2326.4
55°	2116.2	2158.9	2215.2	2183.2	2147.2
57.5°	1941.9	1985.1	2028.3	1995.8	1964.7
60°	1766.1	1804.0	1839.4	1806.4	1782.6
62.5°	1587.5	1620.0	1650.6	1619.0	1596.7
65°	1406.9	1435.5	1460.8	1431.7	1407.9
67.5°	1227.3	1251.5	1274.8	1244.7	1220.0
70°	1047.6	1068.5	1089.9	1058.8	1036.0
72.5°	870.4	888.9	907.8	877.7	857.8
75°	698.1	714.1	729.7	703.0	687.4
77.5°	533.5	547.1	557.8	540.8	525.8
80°	380.6	390.8	397.1	390.3	376.2
82.5°	244.7	252.0	255.4	254.9	245.6
85°	133.0	135.4	141.8	143.2	138.4
87.5°	51.5	54.9	56.3	60.7	55.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)