

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: P489731

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-5LO-20-120-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: P489731  
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-20-120-EDD  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

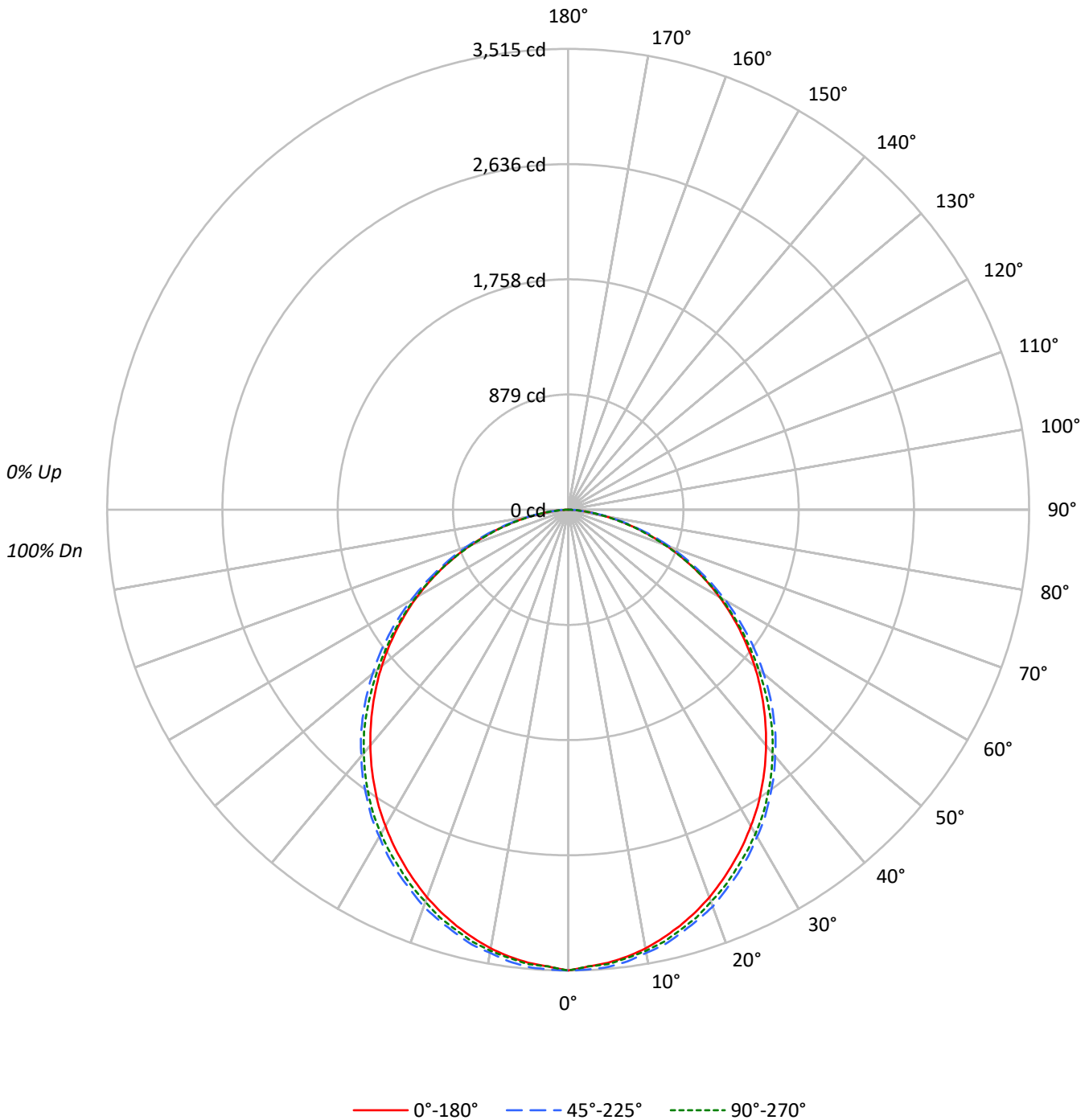
Lumens per Lamp: N/A  
Luminaire Lumens: 9240.3 lumens  
Efficiency: N/A  
Efficacy: 79.0 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

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									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	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°	4729	4729	4729
5°	4685	4729	4700
10°	4642	4689	4667
15°	4578	4652	4619
20°	4506	4613	4557
25°	4418	4546	4494
30°	4329	4476	4435
35°	4231	4399	4358
40°	4121	4311	4256
45°	4006	4208	4129
50°	3885	4073	3967
55°	3744	3920	3799
60°	3585	3734	3618
65°	3379	3508	3381
70°	3109	3234	3074
75°	2738	2861	2695
80°	2225	2321	2199
85°	1548	1650	1612



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	331.0	3.6
10°-20°	938.0	10.2
20°-30°	1399.0	15.1
30°-40°	1657.8	17.9
40°-50°	1677.5	18.2
50°-60°	1465.0	15.9
60°-70°	1070.6	11.6
70°-80°	569.6	6.2
80°-90°	131.7	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°	2668.0	28.9
0°-40°	4325.9	46.8
0°-60°	7468.4	80.8
0°-90°	9240.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9240.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3515	3515	3515	3515	3515	
5°	3469	3476	3502	3510	3480	329
15°	3286	3308	3340	3360	3316	927
25°	2976	3013	3062	3074	3027	1371
35°	2576	2616	2678	2697	2653	1611
45°	2105	2143	2211	2213	2170	1624
55°	1596	1628	1671	1647	1620	1427
65°	1061	1083	1102	1080	1062	1050
75°	527	539	550	530	518	560
85°	100	102	107	108	104	127
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3514.7	3514.7	3514.7	3514.7	3514.7
2.5°	3487.2	3498.6	3510.3	3515.4	3486.9
5°	3468.9	3475.5	3501.5	3509.6	3479.9
7.5°	3438.9	3448.8	3474.0	3477.7	3449.1
10°	3397.9	3415.4	3432.3	3450.6	3415.8
12.5°	3345.5	3369.3	3397.9	3401.2	3374.8
15°	3286.5	3308.5	3339.6	3359.8	3316.2
17.5°	3220.6	3241.9	3282.2	3285.8	3259.4
20°	3147.0	3173.4	3221.7	3230.2	3182.9
22.5°	3063.5	3099.1	3139.3	3147.4	3112.6
25°	2976.0	3012.6	3062.4	3073.8	3027.3
27.5°	2884.5	2919.6	2975.7	2983.7	2944.5
30°	2786.3	2819.3	2880.8	2894.4	2854.4
32.5°	2686.7	2719.7	2787.8	2799.1	2760.3
35°	2576.1	2616.4	2678.3	2697.0	2653.4
37.5°	2463.4	2502.5	2572.8	2589.7	2542.8
40°	2346.5	2385.4	2454.6	2468.5	2423.4
42.5°	2227.2	2266.0	2339.9	2342.1	2304.8
45°	2105.2	2142.6	2211.4	2213.2	2169.7
47.5°	1981.4	2019.2	2080.7	2073.7	2032.7
50°	1856.2	1892.1	1945.9	1932.0	1895.0
52.5°	1726.6	1761.4	1812.3	1789.6	1754.8
55°	1596.2	1628.4	1670.9	1646.8	1619.7
57.5°	1464.8	1497.3	1529.9	1505.4	1482.0
60°	1332.2	1360.8	1387.5	1362.6	1344.6
62.5°	1197.4	1222.0	1245.0	1221.2	1204.4
65°	1061.2	1082.8	1101.9	1079.9	1061.9
67.5°	925.7	944.0	961.6	938.9	920.2
70°	790.2	806.0	822.1	798.7	781.4
72.5°	656.6	670.5	684.8	662.1	647.1
75°	526.6	538.7	550.4	530.2	518.5
77.5°	402.4	412.7	420.8	407.9	396.6
80°	287.1	294.8	299.5	294.4	283.8
82.5°	184.6	190.1	192.6	192.2	185.3
85°	100.3	102.2	106.9	108.0	104.4
87.5°	38.8	41.4	42.5	45.8	42.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)