

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: P489613

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-2HI-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: P489613  
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-LD4-2HI-27-120-EDD  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

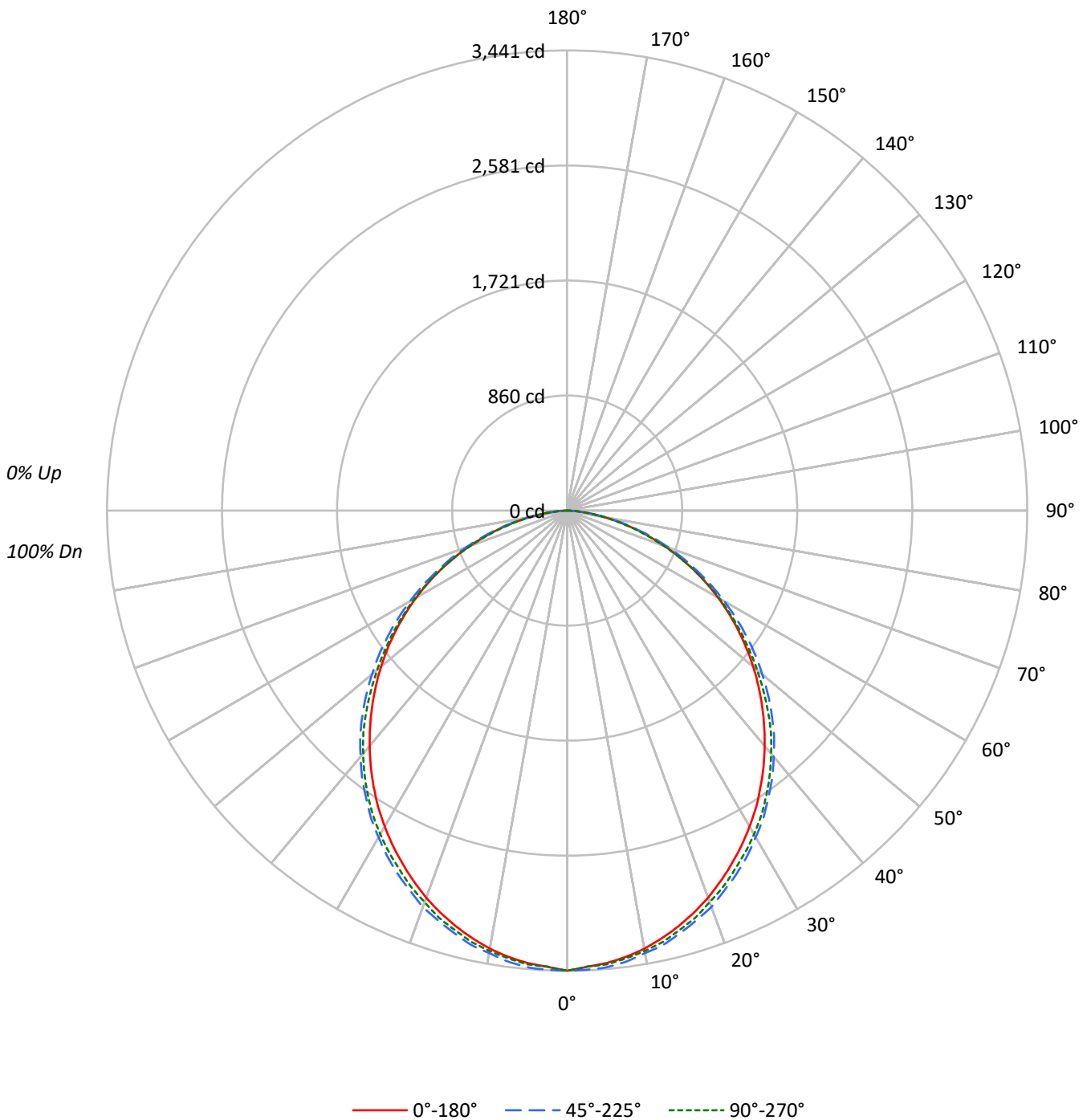
Lumens per Lamp: N/A  
Luminaire Lumens: 9046.3 lumens  
Efficiency: N/A  
Efficacy: 104.7 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 86.4  
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°	4630	4630	4630
5°	4587	4630	4601
10°	4545	4591	4569
15°	4482	4554	4522
20°	4411	4516	4462
25°	4325	4451	4400
30°	4238	4382	4342
35°	4143	4307	4267
40°	4035	4221	4167
45°	3922	4120	4042
50°	3804	3988	3883
55°	3666	3837	3719
60°	3510	3655	3542
65°	3308	3434	3310
70°	3043	3166	3009
75°	2680	2801	2639
80°	2178	2273	2152
85°	1516	1616	1578



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	324.1	3.6
10°-20°	918.3	10.2
20°-30°	1369.6	15.1
30°-40°	1623.0	17.9
40°-50°	1642.3	18.2
50°-60°	1434.3	15.9
60°-70°	1048.1	11.6
70°-80°	557.7	6.2
80°-90°	128.9	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°	2612.0	28.9
0°-40°	4235.1	46.8
0°-60°	7311.6	80.8
0°-90°	9046.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9046.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3441	3441	3441	3441	3441	
5°	3396	3402	3428	3436	3407	322
15°	3218	3239	3270	3289	3247	907
25°	2914	2949	2998	3009	2964	1342
35°	2522	2562	2622	2640	2598	1577
45°	2061	2098	2165	2167	2124	1590
55°	1563	1594	1636	1612	1586	1397
65°	1039	1060	1079	1057	1040	1028
75°	516	527	539	519	508	548
85°	98	100	105	106	102	124
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3440.9	3440.9	3440.9	<i>3440.9</i>	3440.9
2.5°	<i>3414.0</i>	<i>3425.1</i>	<i>3436.6</i>	<i>3441.6</i>	<i>3413.6</i>
5°	3396.1	3402.5	3428.0	<i>3435.9</i>	3406.8
7.5°	3366.7	3376.4	3401.1	<i>3404.7</i>	3376.7
10°	3326.5	3343.7	3360.2	<i>3378.2</i>	3344.1
12.5°	3275.3	3298.6	3326.5	<i>3329.8</i>	3303.9
15°	3217.5	3239.1	3269.5	<i>3289.2</i>	3246.6
17.5°	3153.0	3173.8	3213.2	<i>3216.8</i>	3191.0
20°	3081.0	3106.8	3154.1	<i>3162.3</i>	3116.1
22.5°	2999.2	3034.0	3073.4	<i>3081.3</i>	3047.3
25°	2913.5	2949.4	2998.1	<i>3009.3</i>	2963.7
27.5°	2823.9	2858.3	2913.2	<i>2921.1</i>	2882.7
30°	2727.8	2760.1	2820.3	<i>2833.6</i>	2794.5
32.5°	2630.3	2662.6	2729.3	<i>2740.4</i>	2702.4
35°	2522.1	2561.5	2622.1	<i>2640.4</i>	2597.7
37.5°	2411.6	2450.0	2518.8	<i>2535.3</i>	2489.4
40°	2297.3	2335.3	2403.0	<i>2416.7</i>	2372.6
42.5°	2180.4	2218.4	2290.8	<i>2293.0</i>	2256.4
45°	2061.0	2097.6	2165.0	<i>2166.8</i>	2124.1
47.5°	1939.8	1976.8	2037.0	<i>2030.2</i>	1990.0
50°	1817.2	1852.4	1905.1	<i>1891.5</i>	1855.2
52.5°	1690.3	1724.4	1774.2	<i>1752.0</i>	1717.9
55°	1562.7	1594.3	1635.8	<i>1612.2</i>	1585.6
57.5°	1434.0	1465.9	1497.8	<i>1473.8</i>	1450.9
60°	1304.2	1332.2	1358.4	<i>1334.0</i>	1316.4
62.5°	1172.3	1196.3	1218.9	<i>1195.6</i>	1179.1
65°	1038.9	1060.1	1078.7	<i>1057.2</i>	1039.7
67.5°	906.3	924.2	941.4	<i>919.2</i>	900.9
70°	773.6	789.1	804.8	<i>781.9</i>	765.0
72.5°	642.8	656.4	670.4	<i>648.2</i>	633.5
75°	515.5	527.4	538.8	<i>519.1</i>	507.6
77.5°	394.0	404.0	411.9	<i>399.4</i>	388.3
80°	281.1	288.6	293.3	<i>288.2</i>	277.8
82.5°	180.7	186.1	188.6	<i>188.2</i>	181.4
85°	98.2	100.0	104.7	<i>105.8</i>	102.2
87.5°	38.0	40.5	41.6	<i>44.8</i>	41.2
90°	0.0	0.0	0.0	<i>0.0</i>	0.0

(END OF REPORT)