

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: P489730

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-5LO-20-120-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: P489730  
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-90  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

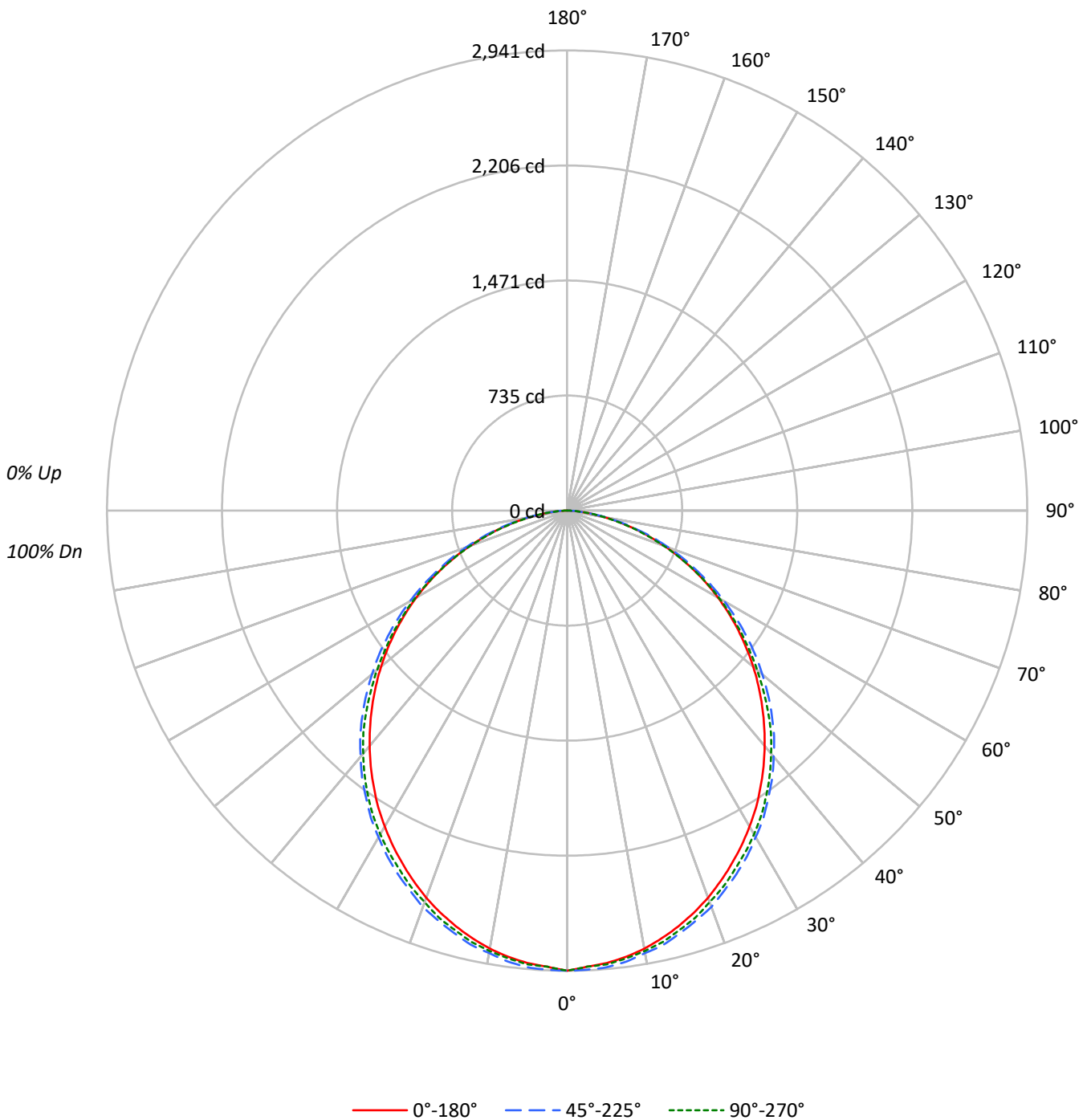
Lumens per Lamp: N/A  
Luminaire Lumens: 7731.8 lumens  
Efficiency: N/A  
Efficacy: 66.1 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

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°	3957	3957	3957
5°	3920	3957	3933
10°	3885	3924	3905
15°	3831	3892	3865
20°	3770	3860	3813
25°	3697	3804	3761
30°	3622	3745	3711
35°	3541	3681	3647
40°	3449	3607	3562
45°	3352	3521	3455
50°	3251	3408	3319
55°	3133	3280	3179
60°	3000	3124	3028
65°	2827	2935	2829
70°	2601	2706	2572
75°	2290	2394	2256
80°	1861	1942	1840
85°	1297	1382	1348



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	277.0	3.6
10°-20°	784.9	10.2
20°-30°	1170.6	15.1
30°-40°	1387.2	17.9
40°-50°	1403.6	18.2
50°-60°	1225.9	15.9
60°-70°	895.8	11.6
70°-80°	476.6	6.2
80°-90°	110.2	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°	2232.5	28.9
0°-40°	3619.7	46.8
0°-60°	6249.2	80.8
0°-90°	7731.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7731.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2941	2941	2941	2941	2941	
5°	2903	2908	2930	2937	2912	275
15°	2750	2768	2794	2811	2775	775
25°	2490	2521	2562	2572	2533	1147
35°	2156	2189	2241	2257	2220	1348
45°	1762	1793	1850	1852	1816	1359
55°	1336	1363	1398	1378	1355	1194
65°	888	906	922	904	889	879
75°	441	451	460	444	434	468
85°	84	86	90	90	87	106
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2940.9	2940.9	2940.9	2940.9	2940.9
2.5°	2917.9	2927.4	2937.2	2941.5	2917.6
5°	2902.6	2908.1	2929.9	2936.6	2911.8
7.5°	2877.5	2885.7	2906.9	2910.0	2886.1
10°	2843.2	2857.9	2872.0	2887.3	2858.2
12.5°	2799.3	2819.3	2843.2	2845.9	2823.9
15°	2750.0	2768.4	2794.4	2811.3	2774.8
17.5°	2694.9	2712.6	2746.3	2749.4	2727.3
20°	2633.3	2655.3	2695.8	2702.8	2663.3
22.5°	2563.4	2593.1	2626.8	2633.6	2604.5
25°	2490.2	2520.8	2562.5	2572.0	2533.1
27.5°	2413.6	2443.0	2489.9	2496.6	2463.8
30°	2331.5	2359.0	2410.5	2421.8	2388.4
32.5°	2248.1	2275.7	2332.7	2342.2	2309.7
35°	2155.6	2189.3	2241.1	2256.7	2220.2
37.5°	2061.2	2094.0	2152.8	2166.9	2127.7
40°	1963.5	1995.9	2053.9	2065.5	2027.8
42.5°	1863.6	1896.1	1957.9	1959.8	1928.5
45°	1761.5	1792.8	1850.4	1851.9	1815.5
47.5°	1658.0	1689.5	1741.0	1735.2	1700.9
50°	1553.2	1583.2	1628.3	1616.6	1585.7
52.5°	1444.7	1473.8	1516.4	1497.4	1468.3
55°	1335.6	1362.6	1398.1	1377.9	1355.2
57.5°	1225.6	1252.9	1280.2	1259.6	1240.0
60°	1114.7	1138.6	1161.0	1140.1	1125.1
62.5°	1002.0	1022.5	1041.8	1021.9	1007.8
65°	888.0	906.0	922.0	903.6	888.6
67.5°	774.6	789.9	804.6	785.6	770.0
70°	661.2	674.4	687.9	668.3	653.9
72.5°	549.4	561.0	573.0	554.0	541.4
75°	440.6	450.7	460.5	443.7	433.9
77.5°	336.7	345.3	352.1	341.3	331.8
80°	240.2	246.7	250.6	246.4	237.5
82.5°	154.4	159.0	161.2	160.9	155.0
85°	84.0	85.5	89.5	90.4	87.3
87.5°	32.5	34.6	35.5	38.3	35.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)