

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: P489117

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-3HI-50-120-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: P489117  
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-24-2-INS-A19156-LD4-3HI-50-120-EDD  
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

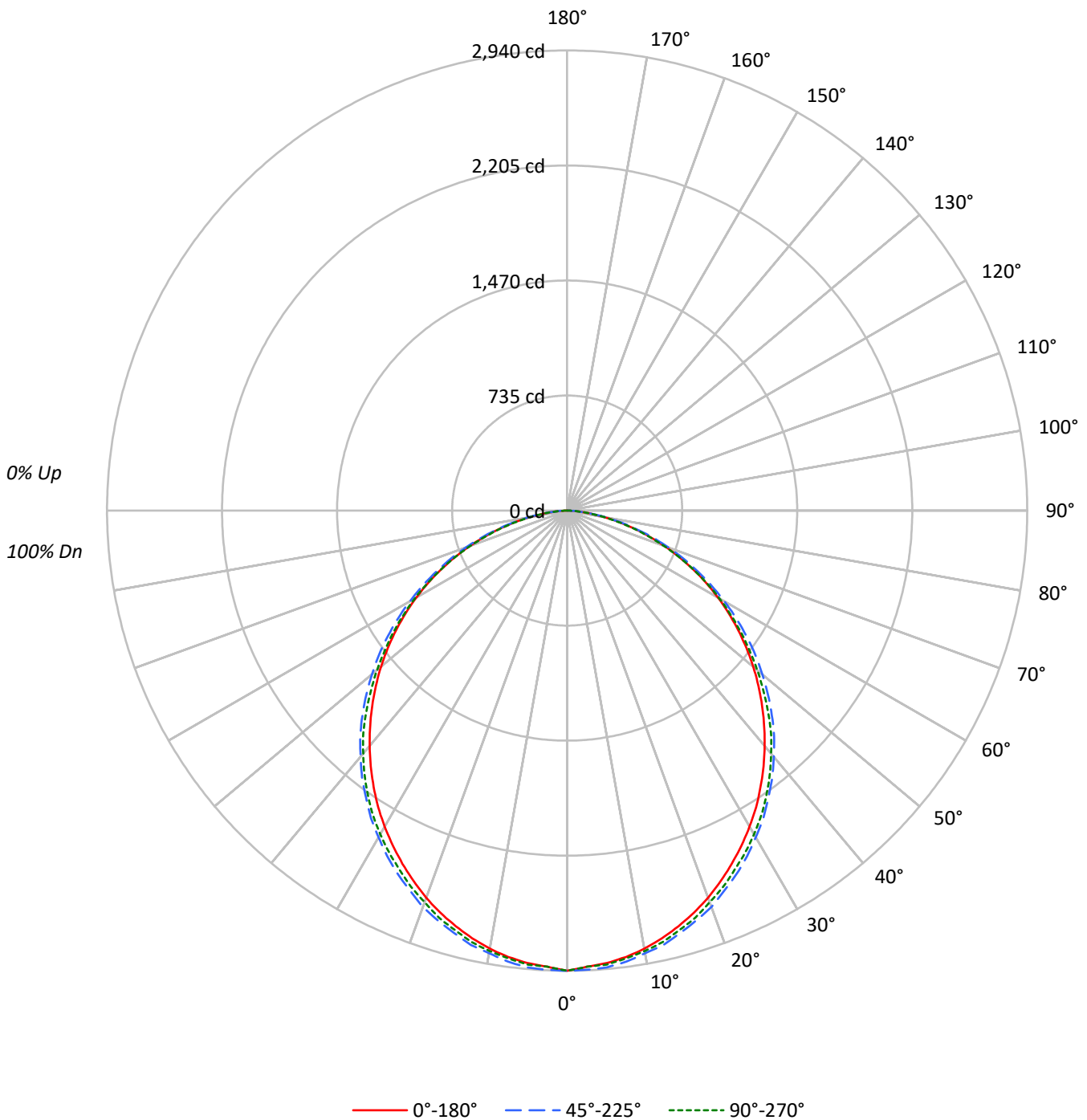
Lumens per Lamp: N/A  
Luminaire Lumens: 7729.9 lumens  
Efficiency: N/A  
Efficacy: 119.3 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 64.8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	7912	7912	7912
5°	7839	7913	7864
10°	7767	7846	7808
15°	7659	7783	7728
20°	7539	7718	7625
25°	7392	7607	7519
30°	7243	7488	7420
35°	7079	7360	7292
40°	6896	7213	7122
45°	6702	7040	6907
50°	6501	6815	6637
55°	6265	6558	6357
60°	5998	6247	6054
65°	5653	5869	5657
70°	5201	5411	5143
75°	4580	4787	4510
80°	3722	3883	3679
85°	2590	2760	2695



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	276.9	3.6
10°-20°	784.7	10.2
20°-30°	1170.3	15.1
30°-40°	1386.9	17.9
40°-50°	1403.3	18.2
50°-60°	1225.6	15.9
60°-70°	895.6	11.6
70°-80°	476.5	6.2
80°-90°	110.1	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°	2231.9	28.9
0°-40°	3618.8	46.8
0°-60°	6247.7	80.8
0°-90°	7729.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7729.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2940	2940	2940	2940	2940	
5°	2902	2907	2929	2936	2911	275
15°	2749	2768	2794	2811	2774	775
25°	2490	2520	2562	2571	2532	1147
35°	2155	2189	2240	2256	2220	1348
45°	1761	1792	1850	1852	1815	1359
55°	1335	1362	1398	1378	1355	1194
65°	888	906	922	903	888	878
75°	440	451	460	444	434	468
85°	84	86	89	90	87	106
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2940.2	2940.2	2940.2	2940.2	2940.2
2.5°	2917.2	2926.7	2936.5	2940.8	2916.9
5°	2901.9	2907.4	2929.2	2935.9	2911.1
7.5°	2876.8	2885.0	2906.2	2909.2	2885.3
10°	2842.5	2857.2	2871.3	2886.6	2857.5
12.5°	2798.7	2818.6	2842.5	2845.2	2823.2
15°	2749.3	2767.7	2793.8	2810.6	2774.1
17.5°	2694.2	2712.0	2745.7	2748.7	2726.7
20°	2632.6	2654.7	2695.1	2702.2	2662.6
22.5°	2562.8	2592.5	2626.2	2632.9	2603.8
25°	2489.6	2520.2	2561.9	2571.4	2532.5
27.5°	2413.0	2442.4	2489.3	2496.0	2463.2
30°	2330.9	2358.5	2409.9	2421.3	2387.9
32.5°	2247.6	2275.1	2332.1	2341.6	2309.1
35°	2155.0	2188.7	2240.5	2256.1	2219.7
37.5°	2060.7	2093.5	2152.3	2166.4	2127.2
40°	1963.0	1995.4	2053.3	2065.0	2027.3
42.5°	1863.1	1895.6	1957.5	1959.3	1928.1
45°	1761.1	1792.4	1849.9	1851.5	1815.0
47.5°	1657.6	1689.1	1740.6	1734.8	1700.5
50°	1552.8	1582.8	1627.9	1616.2	1585.3
52.5°	1444.4	1473.5	1516.0	1497.0	1467.9
55°	1335.3	1362.3	1397.8	1377.6	1354.9
57.5°	1225.3	1252.6	1279.9	1259.3	1239.7
60°	1114.4	1138.3	1160.7	1139.9	1124.9
62.5°	1001.7	1022.2	1041.5	1021.6	1007.5
65°	887.8	905.8	921.8	903.4	888.4
67.5°	774.4	789.7	804.4	785.4	769.8
70°	661.1	674.2	687.7	668.1	653.7
72.5°	549.3	560.9	572.8	553.8	541.3
75°	440.5	450.6	460.4	443.6	433.8
77.5°	336.7	345.2	352.0	341.3	331.8
80°	240.2	246.6	250.6	246.3	237.4
82.5°	154.4	159.0	161.1	160.8	155.0
85°	83.9	85.5	89.4	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)