

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: P489111

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-3HI-30-120-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: P489111  
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-30-120-EDD  
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

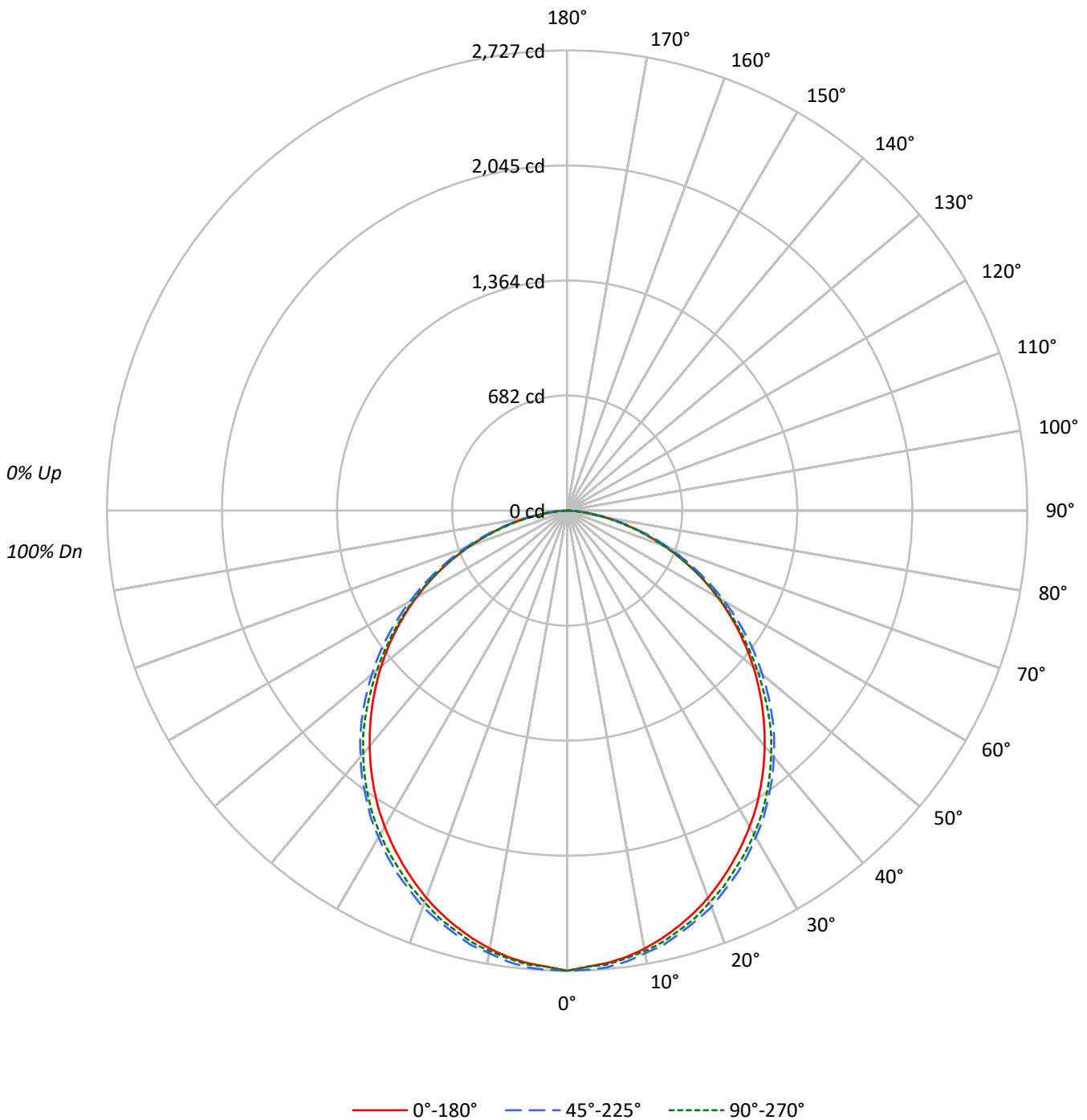
Lumens per Lamp: N/A  
Luminaire Lumens: 7170.2 lumens  
Efficiency: N/A  
Efficacy: 110.7 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 64.8  
Input Voltage (V): NR  
Input Current (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°	7339	7339	7339
5°	7271	7340	7294
10°	7204	7278	7243
15°	7105	7220	7169
20°	6993	7159	7073
25°	6857	7056	6975
30°	6718	6946	6883
35°	6567	6827	6764
40°	6396	6691	6606
45°	6217	6530	6407
50°	6030	6321	6156
55°	5811	6083	5896
60°	5563	5795	5616
65°	5244	5444	5247
70°	4825	5019	4771
75°	4248	4441	4184
80°	3453	3601	3412
85°	2405	2563	2501



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	256.9	3.6
10°-20°	727.9	10.2
20°-30°	1085.6	15.1
30°-40°	1286.4	17.9
40°-50°	1301.7	18.2
50°-60°	1136.8	15.9
60°-70°	830.7	11.6
70°-80°	442.0	6.2
80°-90°	102.2	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°	2070.3	28.9
0°-40°	3356.8	46.8
0°-60°	5795.3	80.8
0°-90°	7170.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7170.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2727	2727	2727	2727	2727	
5°	2692	2697	2717	2723	2700	255
15°	2550	2567	2592	2607	2573	719
25°	2309	2338	2376	2385	2349	1064
35°	1999	2030	2078	2093	2059	1250
45°	1634	1663	1716	1717	1684	1260
55°	1239	1264	1297	1278	1257	1107
65°	824	840	855	838	824	815
75°	409	418	427	412	402	434
85°	78	79	83	84	81	99
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2727.3	2727.3	2727.3	2727.3	2727.3
2.5°	2706.0	2714.8	2723.9	2727.9	2705.7
5°	2691.8	2696.9	2717.1	2723.3	2700.3
7.5°	2668.5	2676.1	2695.7	2698.6	2676.4
10°	2636.6	2650.3	2663.4	2677.6	2650.6
12.5°	2596.0	2614.5	2636.6	2639.2	2618.7
15°	2550.3	2567.3	2591.5	2607.1	2573.3
17.5°	2499.1	2515.6	2546.9	2549.7	2529.2
20°	2442.0	2462.5	2500.0	2506.5	2469.8
22.5°	2377.2	2404.8	2436.0	2442.3	2415.3
25°	2309.3	2337.7	2376.4	2385.2	2349.1
27.5°	2238.3	2265.5	2309.0	2315.3	2284.9
30°	2162.1	2187.7	2235.4	2245.9	2215.0
32.5°	2084.8	2110.4	2163.2	2172.1	2141.9
35°	1999.0	2030.3	2078.3	2092.8	2059.0
37.5°	1911.5	1941.9	1996.5	2009.5	1973.2
40°	1820.8	1851.0	1904.7	1915.5	1880.5
42.5°	1728.2	1758.3	1815.7	1817.4	1788.5
45°	1633.6	1662.6	1716.0	1717.4	1683.6
47.5°	1537.5	1566.8	1614.6	1609.2	1577.3
50°	1440.4	1468.2	1510.0	1499.2	1470.5
52.5°	1339.8	1366.8	1406.3	1388.6	1361.7
55°	1238.6	1263.6	1296.6	1277.8	1256.8
57.5°	1136.6	1161.9	1187.2	1168.1	1150.0
60°	1033.7	1055.9	1076.7	1057.3	1043.4
62.5°	929.2	948.2	966.1	947.6	934.6
65°	823.5	840.2	855.0	838.0	824.0
67.5°	718.3	732.5	746.2	728.6	714.1
70°	613.2	625.4	637.9	619.7	606.4
72.5°	509.5	520.3	531.4	513.7	502.1
75°	408.6	418.0	427.1	411.5	402.4
77.5°	312.3	320.2	326.5	316.5	307.7
80°	222.8	228.7	232.4	228.5	220.2
82.5°	143.2	147.5	149.5	149.2	143.8
85°	77.9	79.3	83.0	83.8	81.0
87.5°	30.1	32.1	33.0	35.5	32.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)