

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: P489200

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-5LO-50-120-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: P489200  
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-LD4-5LO-50-120-EDD-90  
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

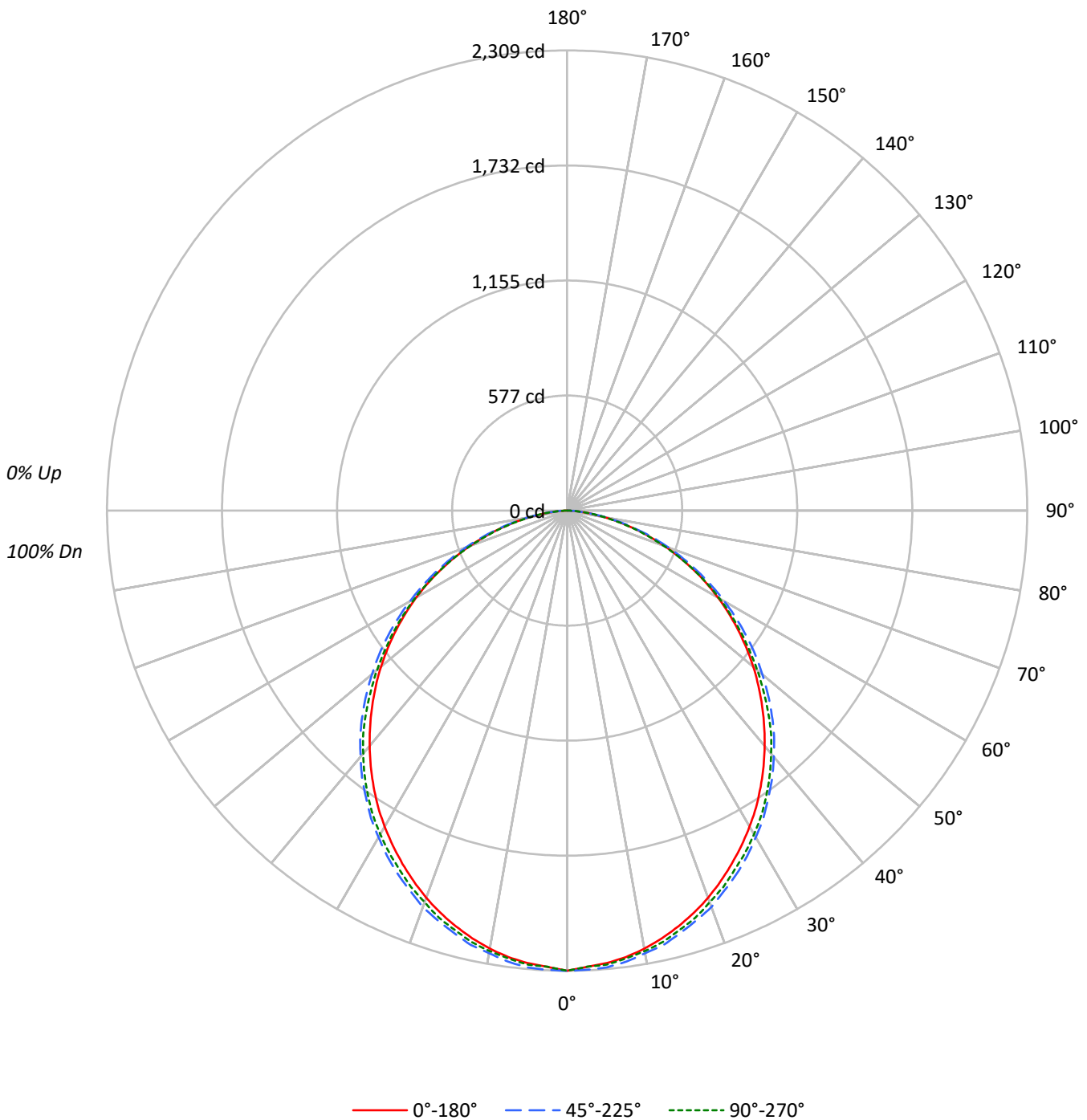
Lumens per Lamp: N/A  
Luminaire Lumens: 6071.2 lumens  
Efficiency: N/A  
Efficacy: 103.8 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 58.5  
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°	6214	6214	6214
5°	6157	6215	6176
10°	6100	6162	6133
15°	6016	6113	6070
20°	5921	6062	5989
25°	5806	5974	5906
30°	5688	5881	5828
35°	5560	5781	5727
40°	5416	5665	5593
45°	5264	5530	5425
50°	5106	5352	5213
55°	4921	5151	4993
60°	4711	4906	4755
65°	4440	4610	4443
70°	4085	4249	4039
75°	3597	3760	3542
80°	2923	3050	2890
85°	2035	2171	2118



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	217.5	3.6
10°-20°	616.3	10.2
20°-30°	919.2	15.1
30°-40°	1089.3	17.9
40°-50°	1102.2	18.2
50°-60°	962.6	15.9
60°-70°	703.4	11.6
70°-80°	374.3	6.2
80°-90°	86.5	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°	1753.0	28.9
0°-40°	2842.3	46.8
0°-60°	4907.0	80.8
0°-90°	6071.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6071.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2309	2309	2309	2309	2309	
5°	2279	2284	2301	2306	2286	216
15°	2159	2174	2194	2208	2179	609
25°	1955	1979	2012	2020	1989	901
35°	1693	1719	1760	1772	1743	1059
45°	1383	1408	1453	1454	1426	1067
55°	1049	1070	1098	1082	1064	938
65°	697	712	724	710	698	690
75°	346	354	362	348	341	368
85°	66	67	70	71	69	83
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2309.3	2309.3	2309.3	2309.3	2309.3
2.5°	2291.2	2298.7	2306.4	2309.7	2291.0
5°	2279.2	2283.5	2300.6	2305.9	2286.4
7.5°	2259.5	2266.0	2282.6	2285.0	2266.2
10°	2232.5	2244.1	2255.1	2267.2	2244.3
12.5°	2198.1	2213.8	2232.5	2234.7	2217.4
15°	2159.4	2173.8	2194.3	2207.5	2178.9
17.5°	2116.1	2130.0	2156.5	2158.9	2141.6
20°	2067.7	2085.0	2116.8	2122.3	2091.3
22.5°	2012.9	2036.2	2062.7	2067.9	2045.1
25°	1955.3	1979.4	2012.1	2019.6	1989.0
27.5°	1895.2	1918.3	1955.1	1960.4	1934.7
30°	1830.7	1852.4	1892.8	1901.7	1875.5
32.5°	1765.3	1786.9	1831.7	1839.1	1813.6
35°	1692.6	1719.1	1759.7	1772.0	1743.4
37.5°	1618.5	1644.3	1690.4	1701.5	1670.7
40°	1541.8	1567.3	1612.7	1621.9	1592.3
42.5°	1463.3	1488.8	1537.4	1538.9	1514.3
45°	1383.2	1407.7	1453.0	1454.2	1425.5
47.5°	1301.9	1326.7	1367.1	1362.5	1335.6
50°	1219.6	1243.2	1278.5	1269.4	1245.1
52.5°	1134.4	1157.3	1190.7	1175.8	1153.0
55°	1048.8	1069.9	1097.9	1082.0	1064.2
57.5°	962.4	983.8	1005.2	989.1	973.7
60°	875.3	894.1	911.6	895.3	883.5
62.5°	786.8	802.9	818.0	802.4	791.3
65°	697.3	711.5	724.0	709.5	697.7
67.5°	608.2	620.3	631.8	616.9	604.6
70°	519.2	529.6	540.1	524.7	513.4
72.5°	431.4	440.5	449.9	435.0	425.1
75°	346.0	353.9	361.6	348.4	340.7
77.5°	264.4	271.2	276.4	268.0	260.6
80°	188.6	193.7	196.8	193.4	186.5
82.5°	121.3	124.9	126.6	126.3	121.7
85°	65.9	67.1	70.3	71.0	68.6
87.5°	25.5	27.2	27.9	30.1	27.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)