

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: P489107

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-3HI-20-120-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: P489107  
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-20-120-EDD  
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

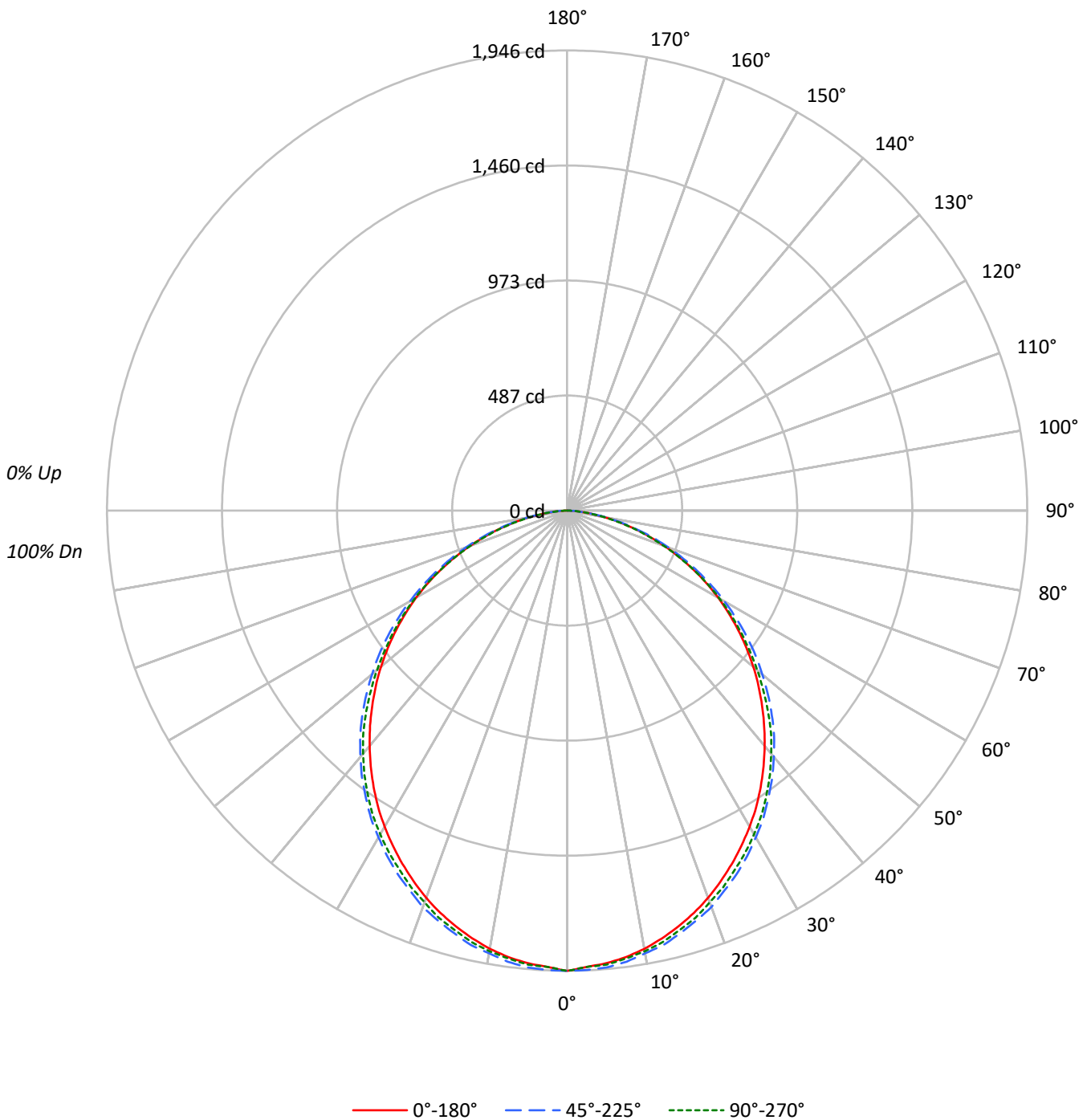
Lumens per Lamp: N/A  
Luminaire Lumens: 5117.5 lumens  
Efficiency: N/A  
Efficacy: 79.0 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

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	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°	5238	5238	5238
5°	5190	5238	5206
10°	5142	5194	5169
15°	5071	5153	5117
20°	4991	5110	5048
25°	4894	5036	4978
30°	4795	4958	4912
35°	4687	4873	4827
40°	4565	4775	4715
45°	4437	4661	4573
50°	4304	4512	4394
55°	4147	4342	4208
60°	3971	4135	4008
65°	3742	3885	3745
70°	3444	3582	3405
75°	3032	3169	2986
80°	2464	2571	2436
85°	1717	1828	1785



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	183.3	3.6
10°-20°	519.5	10.2
20°-30°	774.8	15.1
30°-40°	918.2	17.9
40°-50°	929.0	18.2
50°-60°	811.4	15.9
60°-70°	592.9	11.6
70°-80°	315.5	6.2
80°-90°	72.9	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°	1477.6	28.9
0°-40°	2395.8	46.8
0°-60°	4136.2	80.8
0°-90°	5117.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5117.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1946	1946	1946	1946	1946	
5°	1921	1925	1939	1944	1927	182
15°	1820	1832	1850	1861	1837	513
25°	1648	1668	1696	1702	1677	759
35°	1427	1449	1483	1494	1470	892
45°	1166	1187	1225	1226	1202	899
55°	884	902	925	912	897	790
65°	588	600	610	598	588	582
75°	292	298	305	294	287	310
85°	56	57	59	60	58	70
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1946.5	1946.5	1946.5	1946.5	1946.5
2.5°	1931.3	1937.6	1944.1	1946.9	1931.1
5°	1921.2	1924.8	1939.2	1943.7	1927.2
7.5°	1904.5	1910.0	1924.0	1926.0	1910.2
10°	1881.8	1891.6	1900.9	1911.0	1891.8
12.5°	1852.8	1866.0	1881.8	1883.6	1869.0
15°	1820.2	1832.3	1849.6	1860.7	1836.6
17.5°	1783.7	1795.4	1817.7	1819.8	1805.2
20°	1742.9	1757.5	1784.3	1788.9	1762.8
22.5°	1696.7	1716.3	1738.6	1743.1	1723.8
25°	1648.2	1668.5	1696.1	1702.3	1676.6
27.5°	1597.5	1617.0	1648.0	1652.4	1630.7
30°	1543.1	1561.4	1595.5	1603.0	1580.9
32.5°	1488.0	1506.2	1543.9	1550.2	1528.7
35°	1426.7	1449.0	1483.3	1493.7	1469.5
37.5°	1364.3	1386.0	1424.9	1434.2	1408.3
40°	1299.6	1321.1	1359.4	1367.1	1342.2
42.5°	1233.5	1255.0	1295.9	1297.1	1276.4
45°	1165.9	1186.6	1224.7	1225.7	1201.6
47.5°	1097.4	1118.3	1152.3	1148.5	1125.8
50°	1028.0	1047.9	1077.7	1070.0	1049.5
52.5°	956.2	975.5	1003.7	991.1	971.8
55°	884.0	901.9	925.4	912.0	897.0
57.5°	811.2	829.3	847.3	833.7	820.7
60°	737.8	753.6	768.4	754.6	744.7
62.5°	663.2	676.8	689.5	676.4	667.0
65°	587.7	599.7	610.2	598.1	588.1
67.5°	512.7	522.8	532.6	520.0	509.6
70°	437.7	446.4	455.3	442.3	432.8
72.5°	363.6	371.3	379.2	366.7	358.4
75°	291.6	298.3	304.8	293.7	287.2
77.5°	222.9	228.6	233.0	225.9	219.6
80°	159.0	163.3	165.9	163.1	157.2
82.5°	102.2	105.3	106.7	106.5	102.6
85°	55.6	56.6	59.2	59.8	57.8
87.5°	21.5	22.9	23.5	25.4	23.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)