

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: P489202

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-5STD-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: P489202
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-LD4-5STD-20-120-EDD-90
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

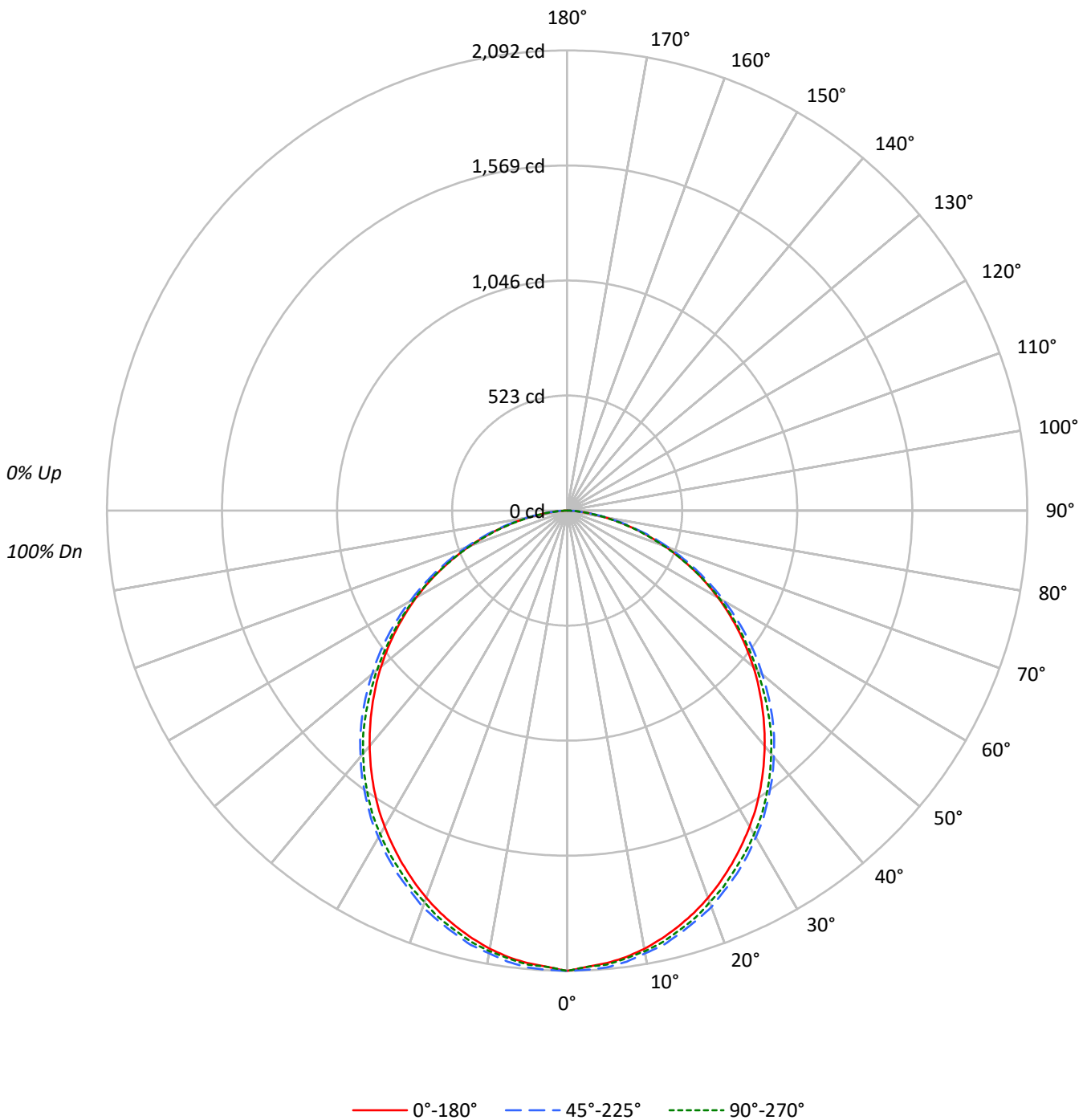
Lumens per Lamp: N/A
Luminaire Lumens: 5501.2 lumens
Efficiency: N/A
Efficacy: 66.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 83.2
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	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°	5631	5631	5631
5°	5579	5631	5596
10°	5528	5584	5557
15°	5451	5539	5500
20°	5365	5493	5426
25°	5261	5413	5351
30°	5154	5329	5281
35°	5038	5238	5189
40°	4907	5133	5068
45°	4770	5010	4916
50°	4626	4850	4723
55°	4458	4667	4524
60°	4268	4445	4308
65°	4023	4177	4025
70°	3702	3851	3660
75°	3260	3407	3210
80°	2648	2763	2619
85°	1843	1967	1917



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	197.1	3.6
10°-20°	558.4	10.2
20°-30°	832.9	15.1
30°-40°	987.0	17.9
40°-50°	998.7	18.2
50°-60°	872.2	15.9
60°-70°	637.4	11.6
70°-80°	339.1	6.2
80°-90°	78.4	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°	1588.4	28.9
0°-40°	2575.4	46.8
0°-60°	4446.3	80.8
0°-90°	5501.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5501.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2092	2092	2092	2092	2092	
5°	2065	2069	2085	2089	2072	196
15°	1957	1970	1988	2000	1974	552
25°	1772	1794	1823	1830	1802	816
35°	1534	1558	1594	1606	1580	959
45°	1253	1276	1317	1318	1292	967
55°	950	970	995	980	964	849
65°	632	645	656	643	632	625
75°	314	321	328	316	309	333
85°	60	61	64	64	62	76
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2092.5	2092.5	2092.5	2092.5	2092.5
2.5°	2076.1	2082.9	2089.8	2092.9	2075.9
5°	2065.2	2069.1	2084.6	2089.4	2071.7
7.5°	2047.3	2053.2	2068.3	2070.4	2053.4
10°	2022.9	2033.4	2043.4	2054.3	2033.6
12.5°	1991.7	2005.9	2022.9	2024.9	2009.2
15°	1956.6	1969.7	1988.3	2000.2	1974.3
17.5°	1917.4	1930.0	1954.0	1956.2	1940.5
20°	1873.6	1889.3	1918.1	1923.1	1894.9
22.5°	1823.9	1845.0	1869.0	1873.8	1853.1
25°	1771.8	1793.6	1823.2	1830.0	1802.3
27.5°	1717.3	1738.2	1771.5	1776.3	1753.0
30°	1658.8	1678.5	1715.1	1723.2	1699.4
32.5°	1599.5	1619.2	1659.7	1666.5	1643.4
35°	1533.7	1557.7	1594.5	1605.6	1579.7
37.5°	1466.6	1489.9	1531.7	1541.8	1513.9
40°	1397.0	1420.1	1461.3	1469.6	1442.8
42.5°	1325.9	1349.0	1393.1	1394.4	1372.2
45°	1253.3	1275.6	1316.6	1317.7	1291.7
47.5°	1179.7	1202.1	1238.7	1234.6	1210.2
50°	1105.1	1126.5	1158.5	1150.2	1128.2
52.5°	1027.9	1048.6	1078.9	1065.4	1044.7
55°	950.3	969.5	994.8	980.4	964.3
57.5°	872.0	891.4	910.8	896.2	882.3
60°	793.1	810.1	826.0	811.2	800.5
62.5°	712.9	727.5	741.2	727.1	717.0
65°	631.8	644.7	656.0	642.9	632.2
67.5°	551.1	562.0	572.5	559.0	547.9
70°	470.5	479.8	489.4	475.5	465.2
72.5°	390.9	399.2	407.7	394.2	385.2
75°	313.5	320.7	327.7	315.7	308.7
77.5°	239.6	245.7	250.5	242.9	236.1
80°	170.9	175.5	178.3	175.3	169.0
82.5°	109.9	113.1	114.7	114.5	110.3
85°	59.7	60.8	63.7	64.3	62.1
87.5°	23.1	24.6	25.3	27.3	25.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)