

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: P488674

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-2HI-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: P488674
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-12-4-INS-A19156-LD4-2HI-20-120-EDD-90
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

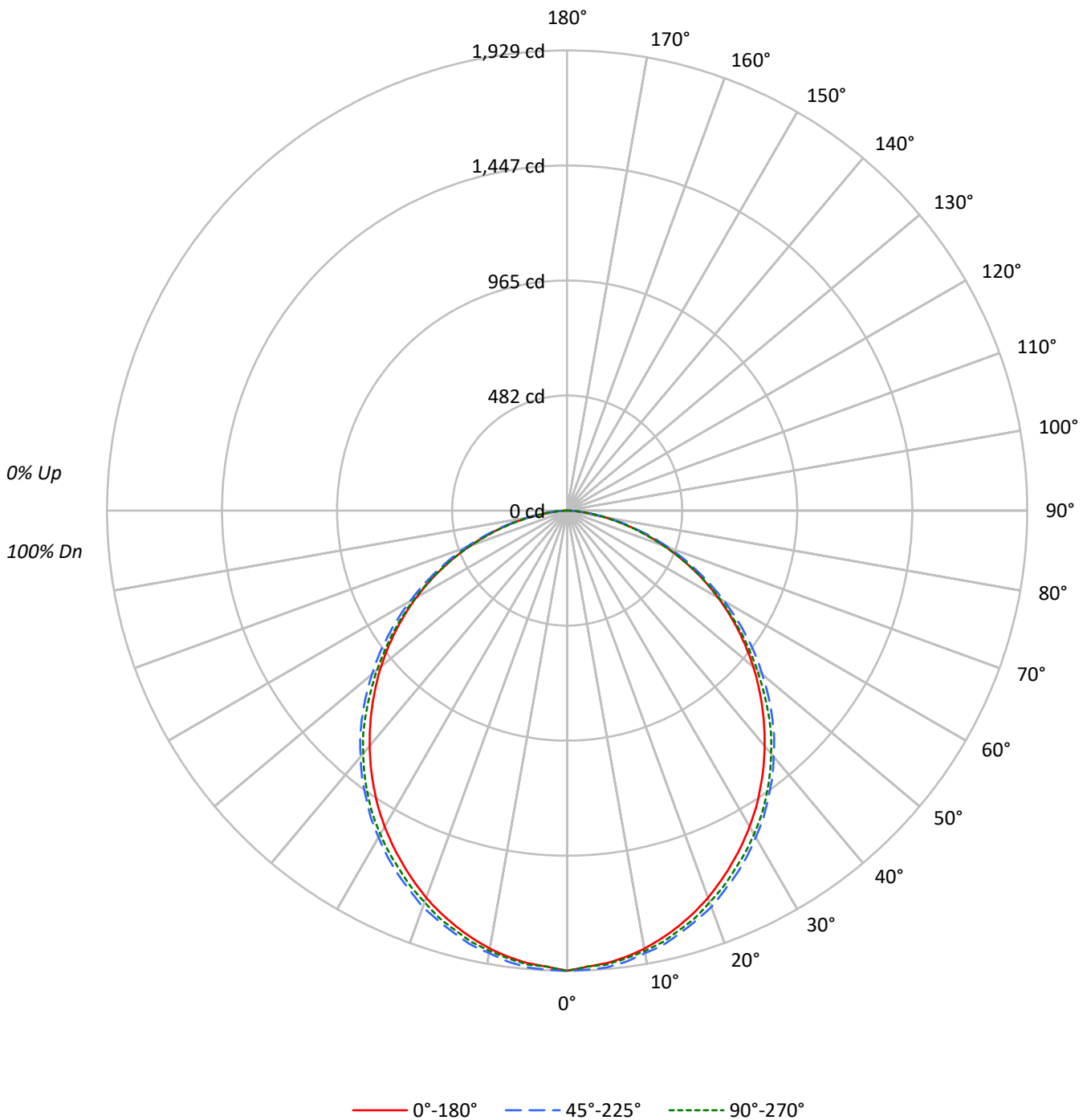
Lumens per Lamp: N/A
Luminaire Lumens: 5071.6 lumens
Efficiency: N/A
Efficacy: 58.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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°	5191	5191	5191
5°	5143	5191	5159
10°	5096	5147	5123
15°	5025	5107	5071
20°	4946	5064	5003
25°	4850	4991	4933
30°	4752	4913	4868
35°	4645	4829	4784
40°	4524	4732	4672
45°	4397	4619	4532
50°	4265	4471	4354
55°	4110	4303	4171
60°	3935	4098	3972
65°	3709	3851	3712
70°	3412	3550	3375
75°	3005	3141	2959
80°	2442	2548	2414
85°	1701	1812	1769



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	181.7	3.6
10°-20°	514.8	10.2
20°-30°	767.9	15.1
30°-40°	909.9	17.9
40°-50°	920.7	18.2
50°-60°	804.1	15.9
60°-70°	587.6	11.6
70°-80°	312.6	6.2
80°-90°	72.3	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°	1464.4	28.9
0°-40°	2374.3	46.8
0°-60°	4099.1	80.8
0°-90°	5071.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5071.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1929	1929	1929	1929	1929	
5°	1904	1908	1922	1926	1910	181
15°	1804	1816	1833	1844	1820	509
25°	1633	1654	1681	1687	1662	753
35°	1414	1436	1470	1480	1456	884
45°	1156	1176	1214	1215	1191	891
55°	876	894	917	904	889	783
65°	582	594	605	593	583	576
75°	289	296	302	291	285	307
85°	55	56	59	59	57	70
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1929.1	1929.1	1929.1	1929.1	1929.1
2.5°	1914.0	1920.2	1926.6	1929.5	1913.8
5°	1903.9	1907.6	1921.8	1926.2	1910.0
7.5°	1887.5	1892.9	1906.7	1908.8	1893.1
10°	1864.9	1874.6	1883.8	1893.9	1874.8
12.5°	1836.2	1849.3	1864.9	1866.8	1852.3
15°	1803.8	1815.9	1833.0	1844.0	1820.1
17.5°	1767.7	1779.3	1801.4	1803.4	1789.0
20°	1727.3	1741.7	1768.3	1772.9	1747.0
22.5°	1681.4	1700.9	1723.0	1727.5	1708.4
25°	1633.4	1653.5	1680.8	1687.1	1661.5
27.5°	1583.2	1602.5	1633.2	1637.6	1616.1
30°	1529.3	1547.4	1581.2	1588.6	1566.7
32.5°	1474.6	1492.7	1530.1	1536.3	1515.0
35°	1413.9	1436.0	1470.0	1480.3	1456.3
37.5°	1352.0	1373.5	1412.1	1421.4	1395.6
40°	1287.9	1309.2	1347.2	1354.8	1330.1
42.5°	1222.4	1243.7	1284.3	1285.5	1265.0
45°	1155.5	1176.0	1213.7	1214.8	1190.8
47.5°	1087.5	1108.2	1142.0	1138.2	1115.7
50°	1018.8	1038.5	1068.0	1060.4	1040.1
52.5°	947.6	966.7	994.7	982.2	963.1
55°	876.1	893.8	917.1	903.8	889.0
57.5°	803.9	821.8	839.7	826.3	813.4
60°	731.2	746.9	761.5	747.9	738.0
62.5°	657.2	670.7	683.3	670.3	661.0
65°	582.5	594.3	604.8	592.7	582.9
67.5°	508.1	518.1	527.8	515.3	505.1
70°	433.7	442.4	451.2	438.3	428.9
72.5°	360.4	368.0	375.8	363.4	355.1
75°	289.0	295.6	302.1	291.0	284.6
77.5°	220.9	226.5	230.9	223.9	217.7
80°	157.6	161.8	164.4	161.6	155.8
82.5°	101.3	104.3	105.7	105.5	101.7
85°	55.1	56.1	58.7	59.3	57.3
87.5°	21.3	22.7	23.3	25.1	23.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)