

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: P488734

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-3STD-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: P488734
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-LD4-3STD-20-120-EDD-90
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

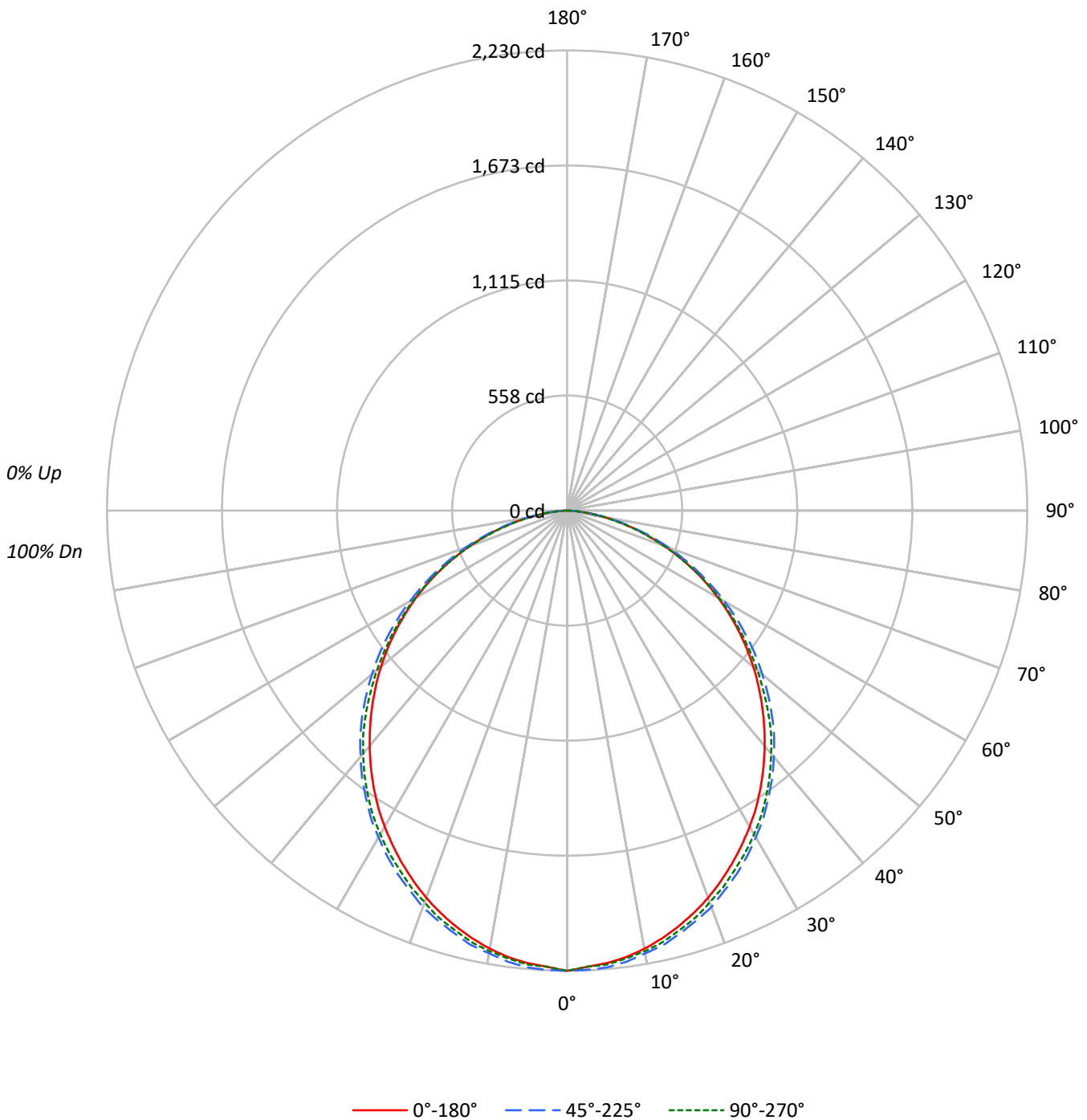
Lumens per Lamp: N/A
Luminaire Lumens: 5864.0 lumens
Efficiency: N/A
Efficacy: 58.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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°	6002	6002	6002
5°	5947	6002	5965
10°	5892	5952	5923
15°	5811	5904	5863
20°	5719	5855	5784
25°	5608	5771	5704
30°	5494	5681	5629
35°	5370	5584	5532
40°	5231	5472	5402
45°	5084	5341	5240
50°	4932	5170	5035
55°	4753	4975	4822
60°	4550	4739	4592
65°	4288	4453	4291
70°	3946	4105	3902
75°	3475	3632	3422
80°	2824	2946	2791
85°	1967	2096	2044



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	210.1	3.6
10°-20°	595.3	10.2
20°-30°	887.8	15.1
30°-40°	1052.1	17.9
40°-50°	1064.6	18.2
50°-60°	929.7	15.9
60°-70°	679.4	11.6
70°-80°	361.5	6.2
80°-90°	83.6	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°	1693.2	28.9
0°-40°	2745.3	46.8
0°-60°	4739.5	80.8
0°-90°	5864.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5864.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2230	2230	2230	2230	2230	
5°	2201	2206	2222	2227	2208	209
15°	2086	2100	2119	2132	2104	588
25°	1889	1912	1944	1951	1921	870
35°	1635	1660	1700	1712	1684	1022
45°	1336	1360	1403	1405	1377	1031
55°	1013	1033	1060	1045	1028	906
65°	674	687	699	685	674	666
75°	334	342	349	336	329	355
85°	64	65	68	69	66	81
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2230.5	2230.5	2230.5	2230.5	2230.5
2.5°	2213.0	2220.2	2227.7	2230.9	2212.8
5°	2201.4	2205.6	2222.1	2227.2	2208.4
7.5°	2182.4	2188.6	2204.7	2207.0	2188.9
10°	2156.3	2167.5	2178.2	2189.8	2167.7
12.5°	2123.1	2138.2	2156.3	2158.4	2141.7
15°	2085.7	2099.6	2119.4	2132.2	2104.5
17.5°	2043.8	2057.3	2082.9	2085.2	2068.5
20°	1997.1	2013.9	2044.5	2049.9	2019.9
22.5°	1944.2	1966.7	1992.3	1997.4	1975.3
25°	1888.6	1911.9	1943.5	1950.7	1921.1
27.5°	1830.5	1852.8	1888.4	1893.5	1868.6
30°	1768.2	1789.2	1828.2	1836.8	1811.5
32.5°	1705.0	1725.9	1769.2	1776.4	1751.7
35°	1634.8	1660.4	1699.7	1711.5	1683.9
37.5°	1563.3	1588.1	1632.8	1643.4	1613.7
40°	1489.1	1513.8	1557.7	1566.5	1537.9
42.5°	1413.4	1438.0	1485.0	1486.4	1462.6
45°	1336.0	1359.7	1403.4	1404.6	1376.9
47.5°	1257.4	1281.4	1320.4	1316.0	1290.0
50°	1178.0	1200.7	1234.9	1226.1	1202.6
52.5°	1095.7	1117.8	1150.1	1135.7	1113.6
55°	1013.0	1033.4	1060.4	1045.0	1027.9
57.5°	929.6	950.2	970.9	955.3	940.5
60°	845.4	863.6	880.5	864.7	853.3
62.5°	759.9	775.5	790.1	775.0	764.3
65°	673.5	687.2	699.3	685.3	673.9
67.5°	587.5	599.1	610.3	595.8	584.0
70°	501.5	511.5	521.7	506.8	495.9
72.5°	416.7	425.5	434.6	420.2	410.6
75°	334.2	341.8	349.3	336.5	329.1
77.5°	255.4	261.9	267.0	258.9	251.7
80°	182.2	187.1	190.1	186.8	180.1
82.5°	117.1	120.6	122.2	122.0	117.6
85°	63.7	64.8	67.9	68.6	66.2
87.5°	24.6	26.3	27.0	29.0	26.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)