

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: P488659

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-1LO-40-120-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: P488659
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-LD4-1LO-40-120-EDD
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

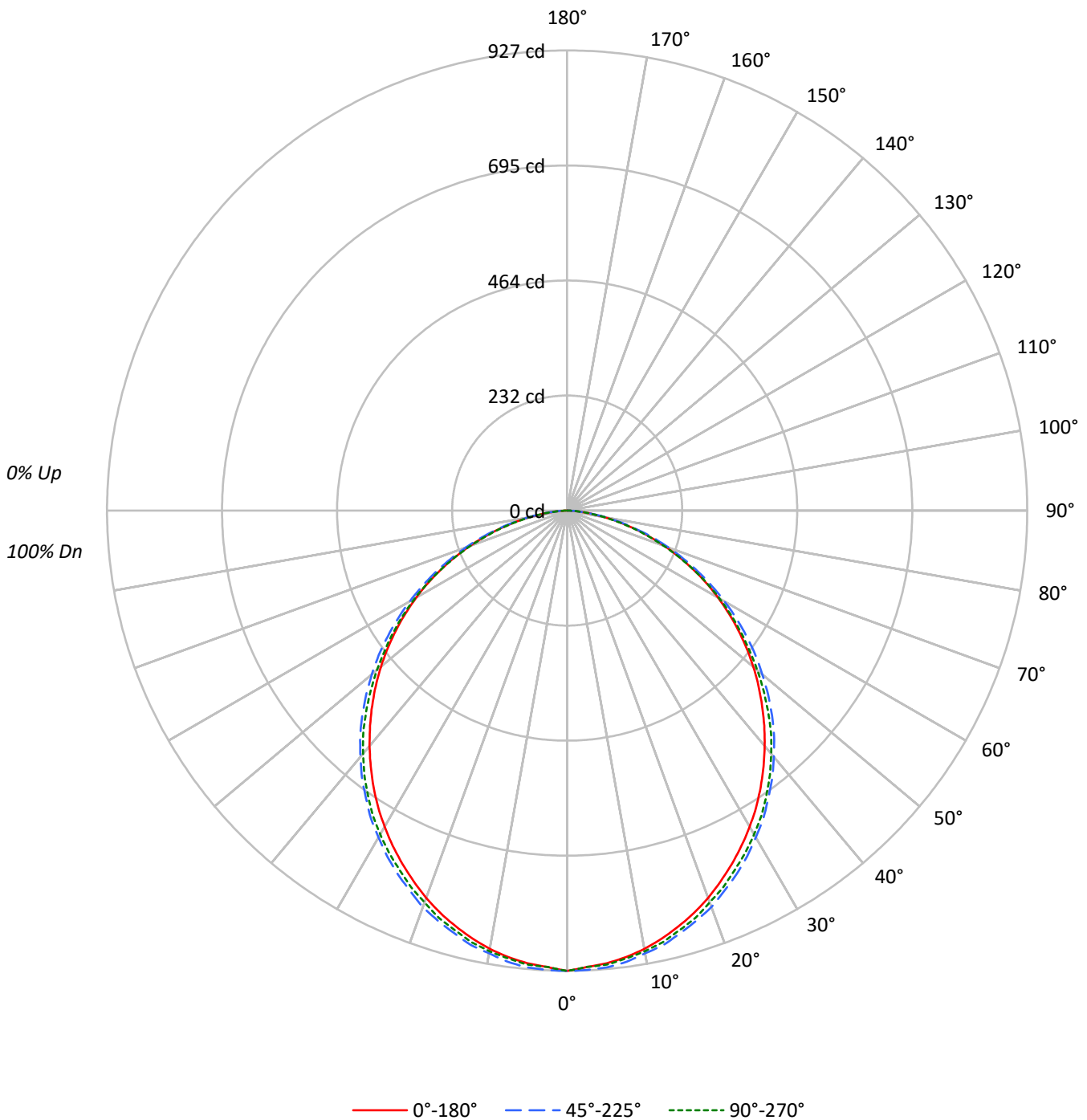
Lumens per Lamp: N/A
Luminaire Lumens: 2438.2 lumens
Efficiency: N/A
Efficacy: 104.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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°	2496	2496	2496
5°	2472	2496	2480
10°	2450	2475	2463
15°	2416	2455	2438
20°	2378	2434	2405
25°	2332	2399	2372
30°	2284	2362	2340
35°	2233	2322	2300
40°	2175	2275	2246
45°	2114	2221	2179
50°	2051	2150	2093
55°	1976	2069	2005
60°	1892	1970	1910
65°	1783	1851	1784
70°	1640	1707	1622
75°	1444	1510	1422
80°	1175	1224	1161
85°	818	871	849



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.3	3.6
10°-20°	247.5	10.2
20°-30°	369.2	15.1
30°-40°	437.4	17.9
40°-50°	442.6	18.2
50°-60°	386.6	15.9
60°-70°	282.5	11.6
70°-80°	150.3	6.2
80°-90°	34.7	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°	704.0	28.9
0°-40°	1141.5	46.8
0°-60°	1970.7	80.8
0°-90°	2438.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2438.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	927	927	927	927	927	
5°	915	917	924	926	918	87
15°	867	873	881	886	875	244
25°	785	795	808	811	799	362
35°	680	690	707	712	700	425
45°	556	565	584	584	572	429
55°	421	430	441	434	427	377
65°	280	286	291	285	280	277
75°	139	142	145	140	137	148
85°	26	27	28	28	28	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	927.4	927.4	927.4	927.4	927.4
2.5°	920.2	923.2	926.2	927.6	920.1
5°	915.3	917.1	923.9	926.1	918.2
7.5°	907.4	910.0	916.7	917.6	910.1
10°	896.6	901.2	905.7	910.5	901.3
12.5°	882.8	889.0	896.6	897.5	890.5
15°	867.2	873.0	881.2	886.5	875.0
17.5°	849.8	855.4	866.0	867.0	860.1
20°	830.4	837.4	850.1	852.3	839.9
22.5°	808.4	817.7	828.4	830.5	821.3
25°	785.3	794.9	808.1	811.1	798.8
27.5°	761.1	770.4	785.2	787.3	777.0
30°	735.2	743.9	760.1	763.7	753.2
32.5°	708.9	717.6	735.6	738.6	728.4
35°	679.8	690.4	706.7	711.6	700.1
37.5°	650.0	660.3	678.9	683.3	671.0
40°	619.2	629.4	647.7	651.3	639.5
42.5°	587.7	597.9	617.4	618.0	608.2
45°	555.5	565.4	583.5	584.0	572.5
47.5°	522.8	532.8	549.0	547.2	536.4
50°	489.8	499.3	513.5	509.8	500.0
52.5°	455.6	464.8	478.2	472.2	463.0
55°	421.2	429.7	440.9	434.5	427.4
57.5°	386.5	395.1	403.7	397.2	391.0
60°	351.5	359.1	366.1	359.5	354.8
62.5°	316.0	322.4	328.5	322.2	317.8
65°	280.0	285.7	290.7	284.9	280.2
67.5°	244.3	249.1	253.7	247.7	242.8
70°	208.5	212.7	216.9	210.7	206.2
72.5°	173.2	176.9	180.7	174.7	170.7
75°	138.9	142.1	145.2	139.9	136.8
77.5°	106.2	108.9	111.0	107.6	104.6
80°	75.8	77.8	79.0	77.7	74.9
82.5°	48.7	50.1	50.8	50.7	48.9
85°	26.5	27.0	28.2	28.5	27.5
87.5°	10.2	10.9	11.2	12.1	11.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)