

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: P488648

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-1HI-50-120-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: P488648
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-LD4-1HI-50-120-EDD-90
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

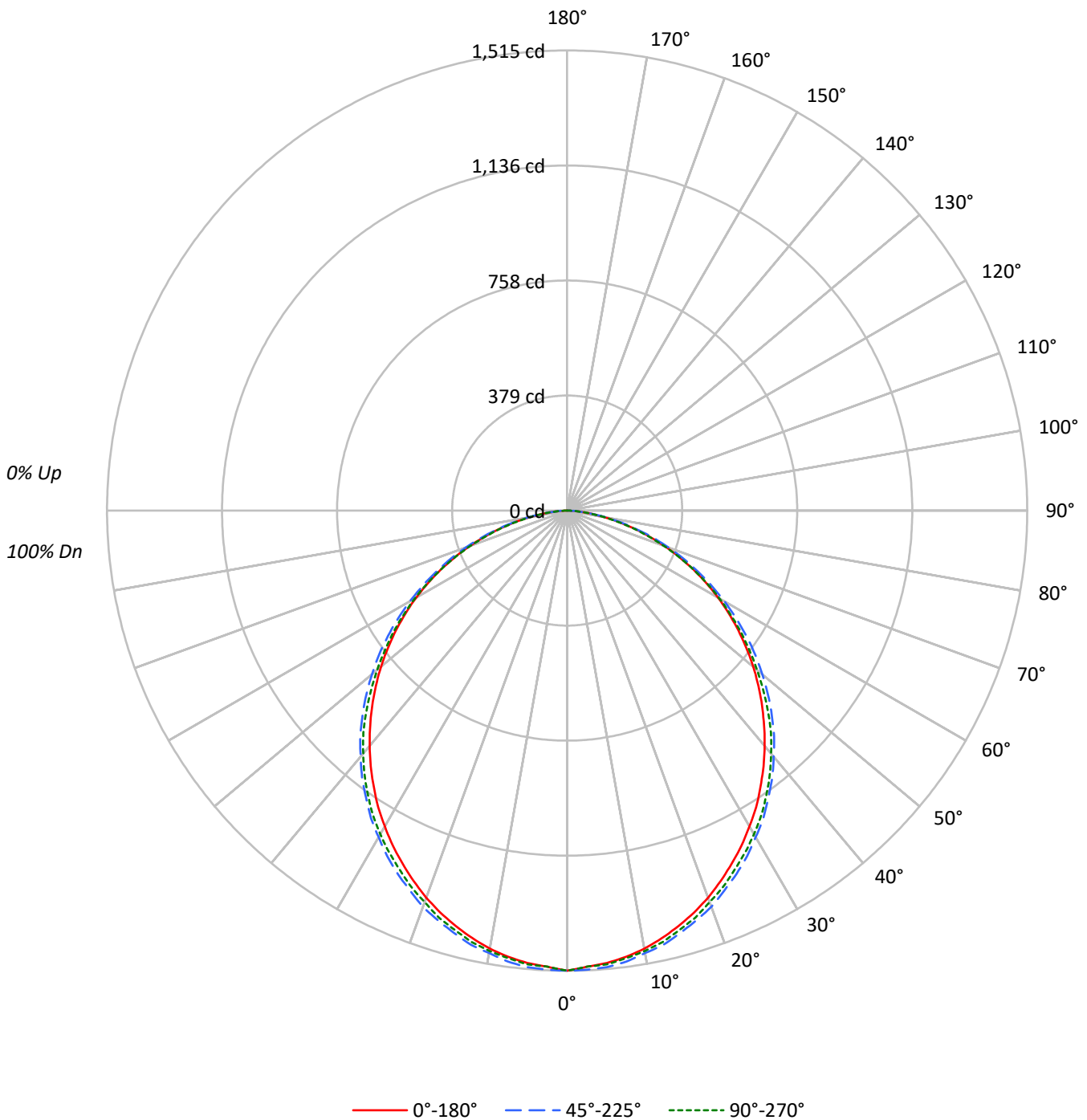
Lumens per Lamp: N/A
Luminaire Lumens: 3982.5 lumens
Efficiency: N/A
Efficacy: 92.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
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	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°	4076	4076	4076
5°	4039	4076	4051
10°	4002	4042	4023
15°	3946	4010	3982
20°	3884	3976	3928
25°	3808	3919	3874
30°	3732	3858	3823
35°	3647	3792	3757
40°	3553	3716	3669
45°	3453	3627	3559
50°	3349	3511	3419
55°	3228	3379	3275
60°	3090	3218	3119
65°	2912	3024	2914
70°	2680	2788	2650
75°	2360	2466	2324
80°	1917	2001	1895
85°	1334	1423	1389



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.7	3.6
10°-20°	404.3	10.2
20°-30°	603.0	15.1
30°-40°	714.5	17.9
40°-50°	723.0	18.2
50°-60°	631.4	15.9
60°-70°	461.4	11.6
70°-80°	245.5	6.2
80°-90°	56.7	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°	1149.9	28.9
0°-40°	1864.4	46.8
0°-60°	3218.8	80.8
0°-90°	3982.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3982.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1515	1515	1515	1515	1515	
5°	1495	1498	1509	1513	1500	142
15°	1416	1426	1439	1448	1429	399
25°	1283	1298	1320	1325	1305	591
35°	1110	1128	1154	1162	1144	694
45°	907	923	953	954	935	700
55°	688	702	720	710	698	615
65°	457	467	475	465	458	453
75°	227	232	237	228	224	241
85°	43	44	46	47	45	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1514.8	1514.8	1514.8	1514.8	1514.8
2.5°	1503.0	1507.9	1512.9	1515.1	1502.8
5°	1495.1	1497.9	1509.1	1512.6	1499.8
7.5°	1482.1	1486.4	1497.3	1498.9	1486.6
10°	1464.5	1472.0	1479.3	1487.2	1472.2
12.5°	1441.9	1452.1	1464.5	1465.9	1454.5
15°	1416.5	1425.9	1439.4	1448.0	1429.3
17.5°	1388.1	1397.2	1414.6	1416.2	1404.8
20°	1356.3	1367.7	1388.5	1392.2	1371.8
22.5°	1320.4	1335.7	1353.0	1356.5	1341.5
25°	1282.6	1298.4	1319.9	1324.8	1304.7
27.5°	1243.2	1258.3	1282.5	1286.0	1269.1
30°	1200.9	1215.1	1241.6	1247.4	1230.2
32.5°	1158.0	1172.2	1201.5	1206.4	1189.7
35°	1110.3	1127.7	1154.3	1162.4	1143.6
37.5°	1061.7	1078.6	1108.9	1116.1	1095.9
40°	1011.3	1028.1	1057.9	1063.9	1044.5
42.5°	959.9	976.6	1008.5	1009.4	993.3
45°	907.3	923.4	953.1	953.9	935.1
47.5°	854.0	870.2	896.8	893.8	876.1
50°	800.0	815.5	838.7	832.7	816.7
52.5°	744.1	759.1	781.1	771.3	756.3
55°	688.0	701.8	720.2	709.7	698.1
57.5°	631.3	645.3	659.4	648.8	638.7
60°	574.2	586.5	598.0	587.3	579.5
62.5°	516.1	526.7	536.6	526.3	519.1
65°	457.4	466.7	474.9	465.4	457.7
67.5°	399.0	406.9	414.4	404.7	396.6
70°	340.6	347.4	354.3	344.2	336.8
72.5°	283.0	289.0	295.1	285.3	278.9
75°	227.0	232.2	237.2	228.5	223.5
77.5°	173.4	177.9	181.3	175.8	170.9
80°	123.7	127.0	129.1	126.9	122.3
82.5°	79.5	81.9	83.0	82.9	79.9
85°	43.2	44.0	46.1	46.6	45.0
87.5°	16.7	17.8	18.3	19.7	18.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)