

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: P489128

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-3LO-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: P489128
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-LD4-3LO-50-120-EDD-90
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

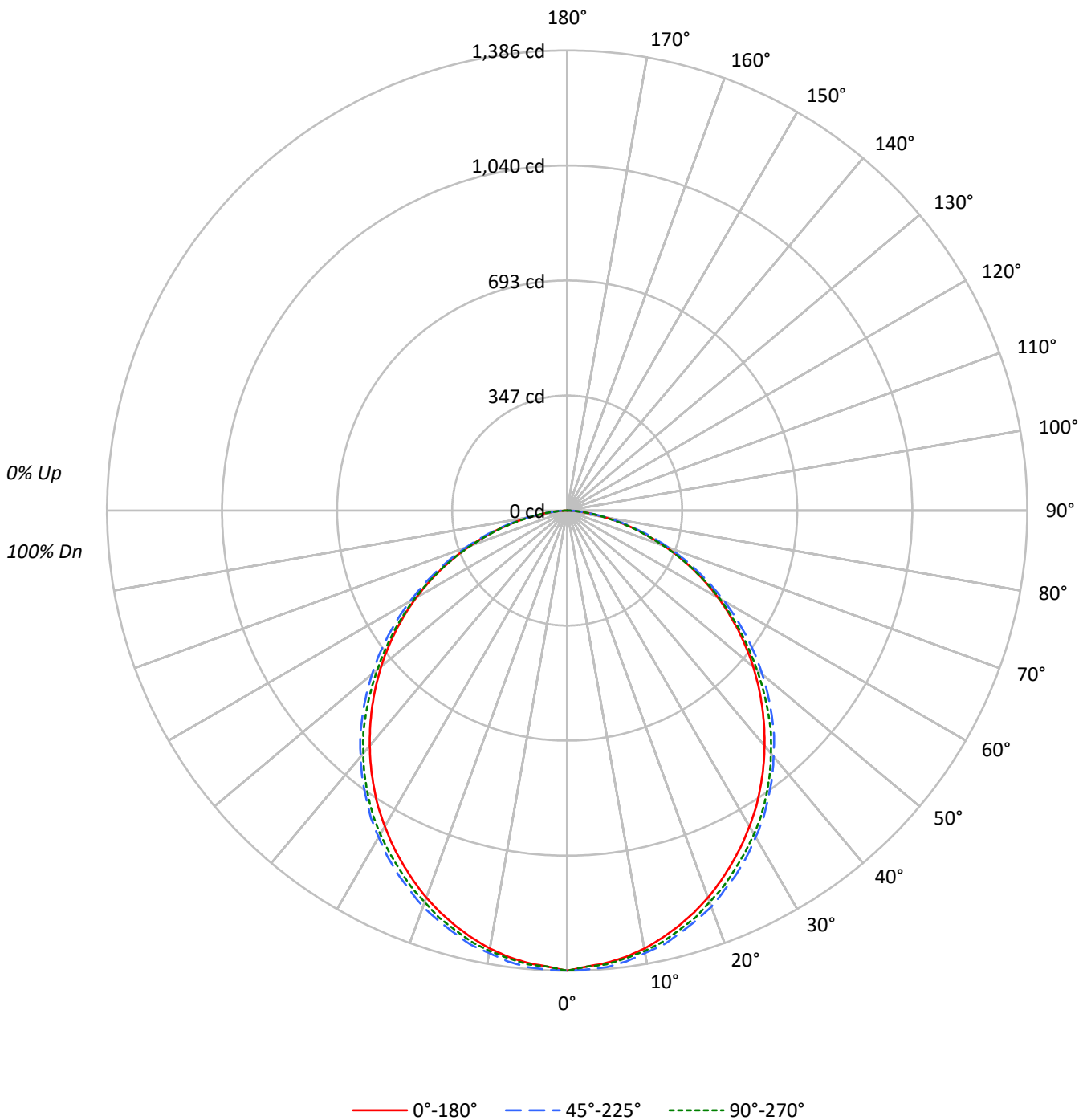
Lumens per Lamp: N/A
Luminaire Lumens: 3642.7 lumens
Efficiency: N/A
Efficacy: 103.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 35.1
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°	3729	3729	3729
5°	3694	3729	3706
10°	3660	3697	3680
15°	3609	3668	3642
20°	3553	3637	3593
25°	3483	3585	3543
30°	3413	3529	3497
35°	3336	3468	3436
40°	3249	3399	3356
45°	3158	3318	3255
50°	3064	3211	3128
55°	2952	3090	2996
60°	2827	2944	2853
65°	2664	2766	2665
70°	2451	2550	2424
75°	2158	2256	2125
80°	1754	1830	1734
85°	1223	1303	1269



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.5	3.6
10°-20°	369.8	10.2
20°-30°	551.5	15.1
30°-40°	653.6	17.9
40°-50°	661.3	18.2
50°-60°	577.6	15.9
60°-70°	422.0	11.6
70°-80°	224.6	6.2
80°-90°	51.9	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°	1051.8	28.9
0°-40°	1705.3	46.8
0°-60°	2944.2	80.8
0°-90°	3642.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3642.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1386	1386	1386	1386	1386	
5°	1368	1370	1380	1384	1372	130
15°	1296	1304	1317	1324	1307	365
25°	1173	1188	1207	1212	1193	540
35°	1016	1031	1056	1063	1046	635
45°	830	845	872	872	855	640
55°	629	642	659	649	638	563
65°	418	427	434	426	419	414
75°	208	212	217	209	204	221
85°	40	40	42	43	41	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1385.6	1385.6	1385.6	1385.6	1385.6
2.5°	1374.7	1379.2	1383.8	1385.8	1374.6
5°	1367.5	1370.1	1380.4	1383.5	1371.8
7.5°	1355.7	1359.6	1369.5	1371.0	1359.7
10°	1339.5	1346.4	1353.1	1360.3	1346.6
12.5°	1318.9	1328.2	1339.5	1340.8	1330.4
15°	1295.6	1304.3	1316.6	1324.5	1307.3
17.5°	1269.6	1278.0	1293.9	1295.3	1284.9
20°	1240.6	1251.0	1270.1	1273.4	1254.8
22.5°	1207.7	1221.7	1237.6	1240.8	1227.0
25°	1173.2	1187.6	1207.3	1211.7	1193.4
27.5°	1137.1	1151.0	1173.1	1176.2	1160.8
30°	1098.4	1111.4	1135.7	1141.0	1125.3
32.5°	1059.2	1072.2	1099.0	1103.5	1088.2
35°	1015.6	1031.4	1055.8	1063.2	1046.0
37.5°	971.1	986.5	1014.3	1020.9	1002.4
40°	925.0	940.4	967.6	973.1	955.4
42.5°	878.0	893.3	922.5	923.3	908.6
45°	829.9	844.6	871.8	872.5	855.3
47.5°	781.1	796.0	820.2	817.5	801.3
50°	731.8	745.9	767.1	761.6	747.1
52.5°	680.7	694.4	714.4	705.5	691.8
55°	629.3	642.0	658.7	649.2	638.5
57.5°	577.4	590.3	603.1	593.5	584.2
60°	525.2	536.4	547.0	537.2	530.1
62.5°	472.1	481.7	490.8	481.4	474.8
65°	418.4	426.9	434.4	425.7	418.6
67.5°	364.9	372.2	379.1	370.1	362.8
70°	311.5	317.7	324.1	314.8	308.1
72.5°	258.8	264.3	270.0	261.0	255.1
75°	207.6	212.4	217.0	209.0	204.4
77.5°	158.7	162.7	165.9	160.8	156.3
80°	113.2	116.2	118.1	116.1	111.9
82.5°	72.8	74.9	75.9	75.8	73.0
85°	39.6	40.3	42.2	42.6	41.1
87.5°	15.3	16.3	16.7	18.0	16.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)