

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: P489156

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-4LO-27-120-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: P489156
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-LD4-4LO-27-120-EDD-90
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

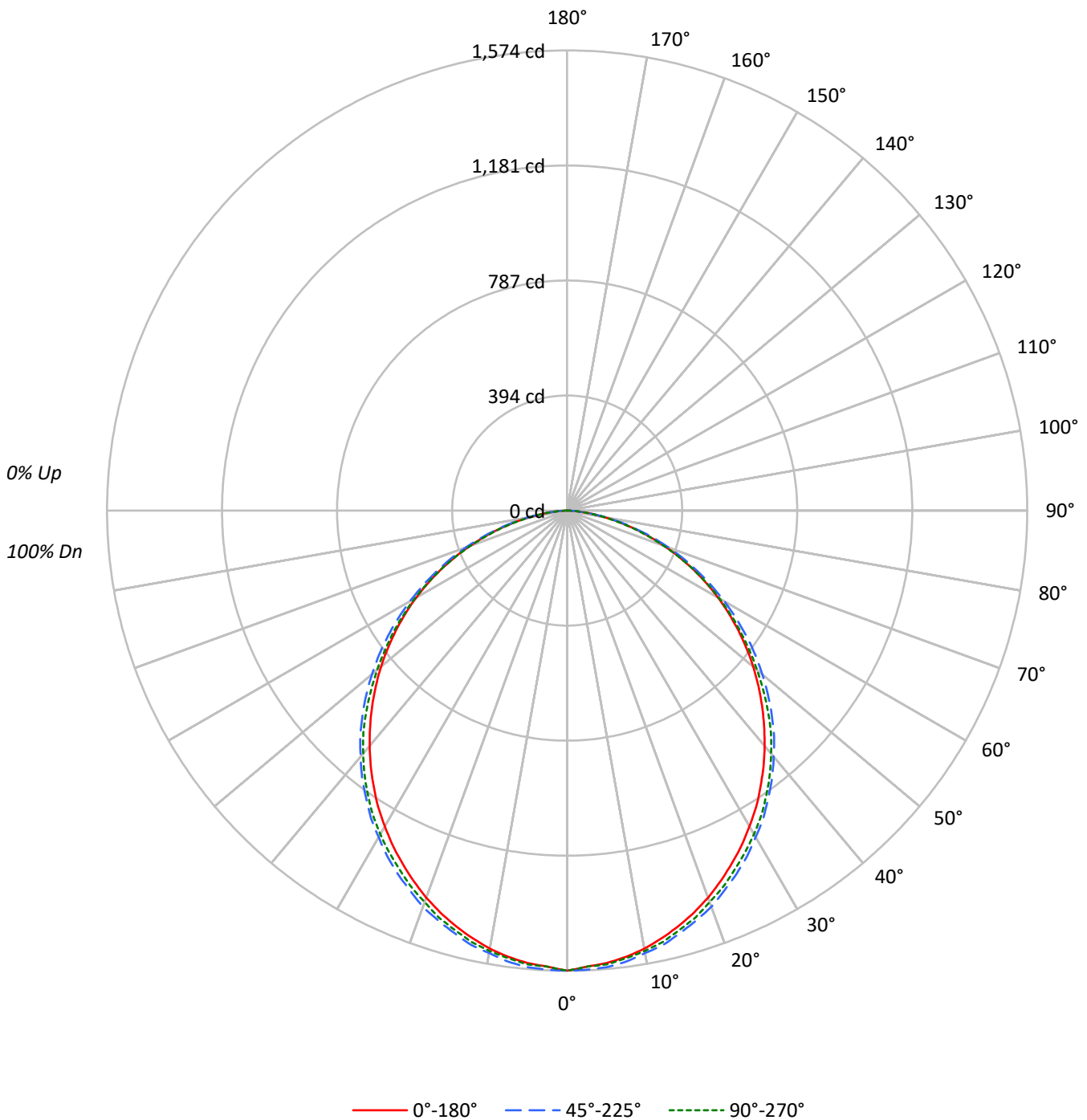
Lumens per Lamp: N/A
Luminaire Lumens: 4137.4 lumens
Efficiency: N/A
Efficacy: 88.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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°	4235	4235	4235
5°	4196	4235	4209
10°	4157	4199	4179
15°	4100	4166	4137
20°	4035	4131	4081
25°	3956	4071	4025
30°	3877	4008	3971
35°	3789	3939	3903
40°	3691	3861	3812
45°	3587	3768	3697
50°	3479	3648	3552
55°	3353	3510	3402
60°	3210	3344	3240
65°	3026	3142	3028
70°	2784	2896	2753
75°	2452	2562	2414
80°	1991	2078	1970
85°	1386	1479	1442



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.2	3.6
10°-20°	420.0	10.2
20°-30°	626.4	15.1
30°-40°	742.3	17.9
40°-50°	751.1	18.2
50°-60°	656.0	15.9
60°-70°	479.4	11.6
70°-80°	255.1	6.2
80°-90°	58.9	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°	1194.6	28.9
0°-40°	1936.9	46.8
0°-60°	3344.0	80.8
0°-90°	4137.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4137.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1574	1574	1574	1574	1574	
5°	1553	1556	1568	1571	1558	147
15°	1472	1481	1495	1504	1485	415
25°	1332	1349	1371	1376	1356	614
35°	1154	1172	1199	1208	1188	721
45°	943	959	990	991	972	727
55°	715	729	748	737	725	639
65°	475	485	493	484	476	470
75°	236	241	246	237	232	251
85°	45	46	48	48	47	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1573.7	1573.7	1573.7	1573.7	1573.7
2.5°	1561.4	1566.5	1571.8	1574.0	1561.3
5°	1553.2	1556.2	1567.8	1571.4	1558.1
7.5°	1539.8	1544.2	1555.5	1557.2	1544.4
10°	1521.4	1529.3	1536.8	1545.0	1529.4
12.5°	1498.0	1508.6	1521.4	1522.9	1511.1
15°	1471.6	1481.4	1495.3	1504.4	1484.9
17.5°	1442.1	1451.6	1469.6	1471.2	1459.4
20°	1409.1	1420.9	1442.5	1446.3	1425.2
22.5°	1371.7	1387.6	1405.7	1409.3	1393.7
25°	1332.5	1348.9	1371.2	1376.3	1355.5
27.5°	1291.5	1307.3	1332.4	1336.0	1318.4
30°	1247.6	1262.4	1289.9	1296.0	1278.1
32.5°	1203.0	1217.8	1248.3	1253.3	1236.0
35°	1153.5	1171.5	1199.2	1207.6	1188.1
37.5°	1103.0	1120.5	1152.0	1159.5	1138.6
40°	1050.7	1068.1	1099.0	1105.3	1085.1
42.5°	997.2	1014.6	1047.7	1048.7	1032.0
45°	942.6	959.3	990.2	991.0	971.5
47.5°	887.2	904.1	931.6	928.5	910.2
50°	831.1	847.2	871.3	865.1	848.5
52.5°	773.1	788.7	811.5	801.3	785.7
55°	714.7	729.1	748.2	737.3	725.2
57.5°	655.9	670.4	685.0	674.1	663.6
60°	596.5	609.3	621.3	610.1	602.1
62.5°	536.2	547.1	557.5	546.8	539.3
65°	475.2	484.8	493.4	483.5	475.5
67.5°	414.5	422.7	430.6	420.4	412.0
70°	353.8	360.9	368.1	357.6	349.9
72.5°	294.0	300.2	306.6	296.4	289.7
75°	235.8	241.2	246.4	237.4	232.2
77.5°	180.2	184.8	188.4	182.7	177.6
80°	128.5	132.0	134.1	131.8	127.1
82.5°	82.6	85.1	86.2	86.1	83.0
85°	44.9	45.7	47.9	48.4	46.7
87.5°	17.4	18.5	19.0	20.5	18.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)