

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P688202

Luminaire Tested: FLR-HA-22-L3C3 (HI)-50-CP187

Issue Date: 5/22/2023

Test Information

Test Method: LM-79-2019
Report Number: P688202
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2207-724-13)
Test Lab: INNOVATION CENTER
Issue Date: 5/22/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FLR-HA-22-L3C3 (HI)-50-CP187
Description: Fail-Safe - FLR Fully Luminous Recessed 2X2 5000K Luminaire at High Lumen setting for High Abuse
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

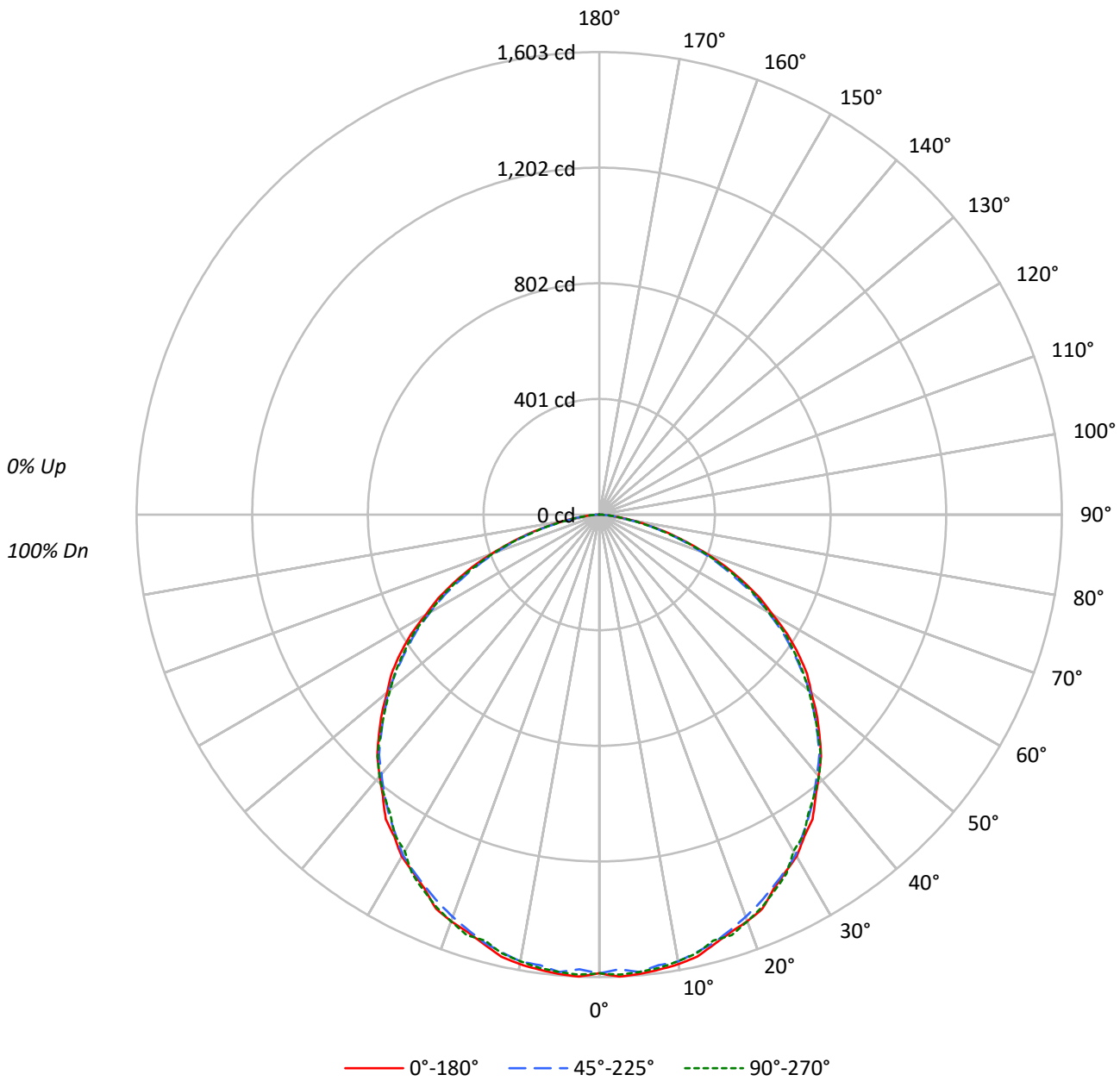
Lumens per Lamp: N/A
Luminaire Lumens: 4412.8 lumens
Efficiency: N/A
Efficacy: 109.0 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.27 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 40.5
Input Voltage (V): 120
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: 24 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	101	97	107	103	99	95	98	95	92	94	92	90	91	89	87	85
2	100	92	85	79	97	90	84	79	86	81	77	83	79	75	80	76	73	71
3	91	81	73	66	88	79	72	66	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	74	63	54	48	61	53	48	59	52	47	57	51	47	44
6	71	57	49	42	69	57	48	42	55	47	42	53	46	41	51	46	41	39
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	48	39	33	59	47	39	33	45	38	33	44	38	33	43	37	33	31
9	57	44	35	30	56	43	35	30	42	35	30	41	34	29	40	34	29	28
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4278	4278	4278
5°	4317	4299	4299
10°	4323	4298	4295
15°	4294	4280	4259
20°	4295	4249	4297
25°	4249	4228	4271
30°	4251	4232	4185
35°	4234	4170	4151
40°	4155	4122	4161
45°	4107	4065	4078
50°	4016	3988	3959
55°	3951	3823	3859
60°	3732	3631	3650
65°	3512	3344	3447
70°	3109	2961	3055
75°	2562	2447	2438
80°	1830	1698	1698
85°	892	865	892

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4107 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	151.0	3.4
10°-20°	433.1	9.8
20°-30°	658.3	14.9
30°-40°	795.8	18.0
40°-50°	824.6	18.7
50°-60°	732.9	16.6
60°-70°	525.6	11.9
70°-80°	250.2	5.7
80°-90°	41.4	0.9
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°	1242.4	28.2
0°-40°	2038.2	46.2
0°-60°	3595.7	81.5
0°-90°	4412.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4412.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1590	1590	1590	1590	1590	
5°	1598	1591	1592	1584	1592	152
15°	1541	1536	1536	1528	1529	436
25°	1431	1428	1424	1423	1439	662
35°	1289	1269	1270	1270	1264	802
45°	1079	1067	1068	1064	1072	832
55°	842	817	815	819	822	749
65°	552	522	525	532	541	544
75°	246	223	235	237	234	262
85°	29	26	28	28	29	44
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1589.8	1589.8	1589.8	1589.8	1589.8
2.5°	1602.6	1594.1	1577.1	1588.1	1595.8
5°	1598.3	1590.7	1591.5	1583.9	1591.5
7.5°	1590.7	1583.0	1575.4	1572.8	1584.7
10°	1582.2	1567.8	1572.8	1566.9	1572.0
12.5°	1569.4	1557.6	1554.2	1546.5	1557.6
15°	1541.4	1536.3	1536.3	1527.8	1528.7
17.5°	1516.8	1506.6	1510.0	1505.7	1527.8
20°	1499.8	1483.6	1483.6	1481.1	1500.6
22.5°	1478.5	1459.8	1455.6	1457.3	1472.6
25°	1430.9	1427.5	1424.1	1423.3	1438.6
27.5°	1397.0	1387.6	1393.6	1391.0	1403.8
30°	1368.1	1351.9	1362.1	1352.8	1346.8
32.5°	1322.2	1316.2	1313.7	1314.5	1317.1
35°	1289.0	1268.6	1269.5	1270.3	1263.5
37.5°	1231.3	1233.8	1222.8	1222.8	1224.5
40°	1182.8	1179.4	1173.5	1173.5	1184.5
42.5°	1137.8	1122.5	1129.3	1119.1	1136.1
45°	1079.2	1067.3	1068.1	1063.9	1071.5
47.5°	1021.4	1011.2	1007.8	1011.2	1007.8
50°	959.3	952.5	952.5	949.1	945.7
52.5°	907.5	883.7	882.0	887.1	888.0
55°	842.1	816.6	814.9	819.1	822.5
57.5°	773.3	743.5	749.5	756.3	760.5
60°	693.4	672.1	674.7	685.7	678.1
62.5°	628.8	599.9	604.2	613.5	613.5
65°	551.5	521.7	525.1	531.9	541.3
67.5°	476.7	445.3	450.4	458.0	460.6
70°	395.1	362.0	376.4	384.1	388.3
72.5°	316.9	291.5	304.2	308.5	311.9
75°	246.4	222.6	235.4	237.1	234.5
77.5°	175.0	158.0	168.2	171.6	169.1
80°	118.1	101.1	109.6	112.2	109.6
82.5°	64.6	59.5	62.9	63.7	62.0
85°	28.9	25.5	28.0	28.0	28.9
87.5°	8.5	7.6	7.6	8.5	7.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)