

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: P688200

Luminaire Tested: FLR-HA-22-L3C3 (HI)-35-CP187

Issue Date: 5/22/2023

Test Information

Test Method: LM-79-2019
Report Number: P688200
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)-35-CP187
Description: Fail-Safe - FLR Fully Luminous Recessed 2X2 3500K Luminaire at High Lumen setting for High Abuse
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

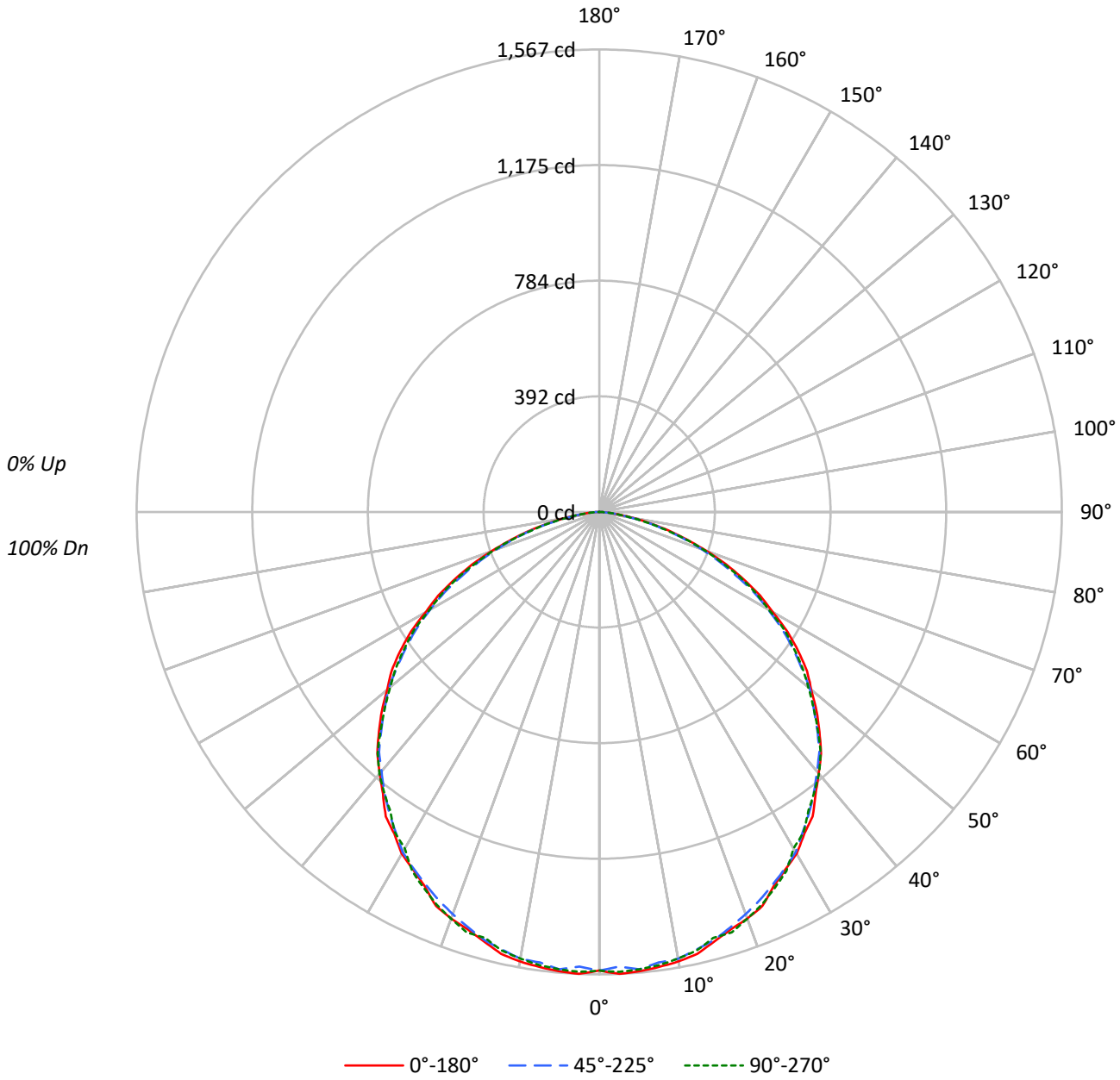
Lumens per Lamp: N/A
Luminaire Lumens: 4313.7 lumens
Efficiency: N/A
Efficacy: 106.2 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.27 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 40.6
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°	4182	4182	4182
5°	4220	4203	4203
10°	4226	4201	4199
15°	4198	4184	4163
20°	4198	4153	4201
25°	4153	4134	4176
30°	4155	4137	4091
35°	4140	4077	4058
40°	4062	4030	4067
45°	4015	3973	3986
50°	3926	3898	3870
55°	3862	3737	3772
60°	3648	3549	3568
65°	3433	3268	3369
70°	3039	2895	2987
75°	2505	2392	2384
80°	1790	1661	1661
85°	871	846	871

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4015 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.6	3.4
10°-20°	423.4	9.8
20°-30°	643.5	14.9
30°-40°	777.9	18.0
40°-50°	806.1	18.7
50°-60°	716.4	16.6
60°-70°	513.7	11.9
70°-80°	244.6	5.7
80°-90°	40.5	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°	1214.5	28.2
0°-40°	1992.4	46.2
0°-60°	3514.9	81.5
0°-90°	4313.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4313.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1554	1554	1554	1554	1554	
5°	1562	1555	1556	1548	1556	149
15°	1507	1502	1502	1494	1494	426
25°	1399	1396	1392	1391	1406	647
35°	1260	1240	1241	1242	1235	784
45°	1055	1043	1044	1040	1047	813
55°	823	798	797	801	804	732
65°	539	510	513	520	529	532
75°	241	218	230	232	229	256
85°	28	25	27	27	28	43
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1554.1	1554.1	1554.1	1554.1	1554.1
2.5°	1566.6	1558.3	1541.7	1552.5	1559.9
5°	1562.4	1555.0	1555.8	1548.3	1555.8
7.5°	1555.0	1547.5	1540.0	1537.5	1549.1
10°	1546.7	1532.5	1537.5	1531.7	1536.7
12.5°	1534.2	1522.6	1519.2	1511.8	1522.6
15°	1506.8	1501.8	1501.8	1493.5	1494.3
17.5°	1482.7	1472.7	1476.1	1471.9	1493.5
20°	1466.1	1450.3	1450.3	1447.8	1466.9
22.5°	1445.3	1427.0	1422.9	1424.6	1439.5
25°	1398.8	1395.5	1392.2	1391.3	1406.3
27.5°	1365.6	1356.4	1362.3	1359.8	1372.2
30°	1337.3	1321.6	1331.5	1322.4	1316.6
32.5°	1292.5	1286.7	1284.2	1285.0	1287.5
35°	1260.1	1240.1	1241.0	1241.8	1235.2
37.5°	1203.6	1206.1	1195.3	1195.3	1197.0
40°	1156.3	1152.9	1147.1	1147.1	1157.9
42.5°	1112.2	1097.3	1103.9	1094.0	1110.6
45°	1054.9	1043.3	1044.1	1040.0	1047.4
47.5°	998.4	988.5	985.1	988.5	985.1
50°	937.8	931.1	931.1	927.8	924.5
52.5°	887.1	863.9	862.2	867.2	868.0
55°	823.2	798.2	796.6	800.7	804.1
57.5°	755.9	726.8	732.6	739.3	743.4
60°	677.8	657.0	659.5	670.3	662.9
62.5°	614.7	586.4	590.6	599.7	599.7
65°	539.1	510.0	513.3	520.0	529.1
67.5°	466.0	435.3	440.2	447.7	450.2
70°	386.2	353.9	368.0	375.5	379.6
72.5°	309.8	284.9	297.4	301.5	304.8
75°	240.9	217.6	230.1	231.7	229.3
77.5°	171.1	154.5	164.5	167.8	165.3
80°	115.5	98.8	107.2	109.6	107.2
82.5°	63.1	58.1	61.5	62.3	60.6
85°	28.2	24.9	27.4	27.4	28.2
87.5°	8.3	7.5	7.5	8.3	7.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)