

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: P688194

Luminaire Tested: FLR-HA-14-40-35-CP187

Issue Date: 5/22/2023

Test Information

Test Method: LM-79-2019
Report Number: P688194
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-14-40-35-CP187
Description: Fail-Safe - FLR Fully Luminous Recessed 1X4 3500K Luminaire for High Abuse
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

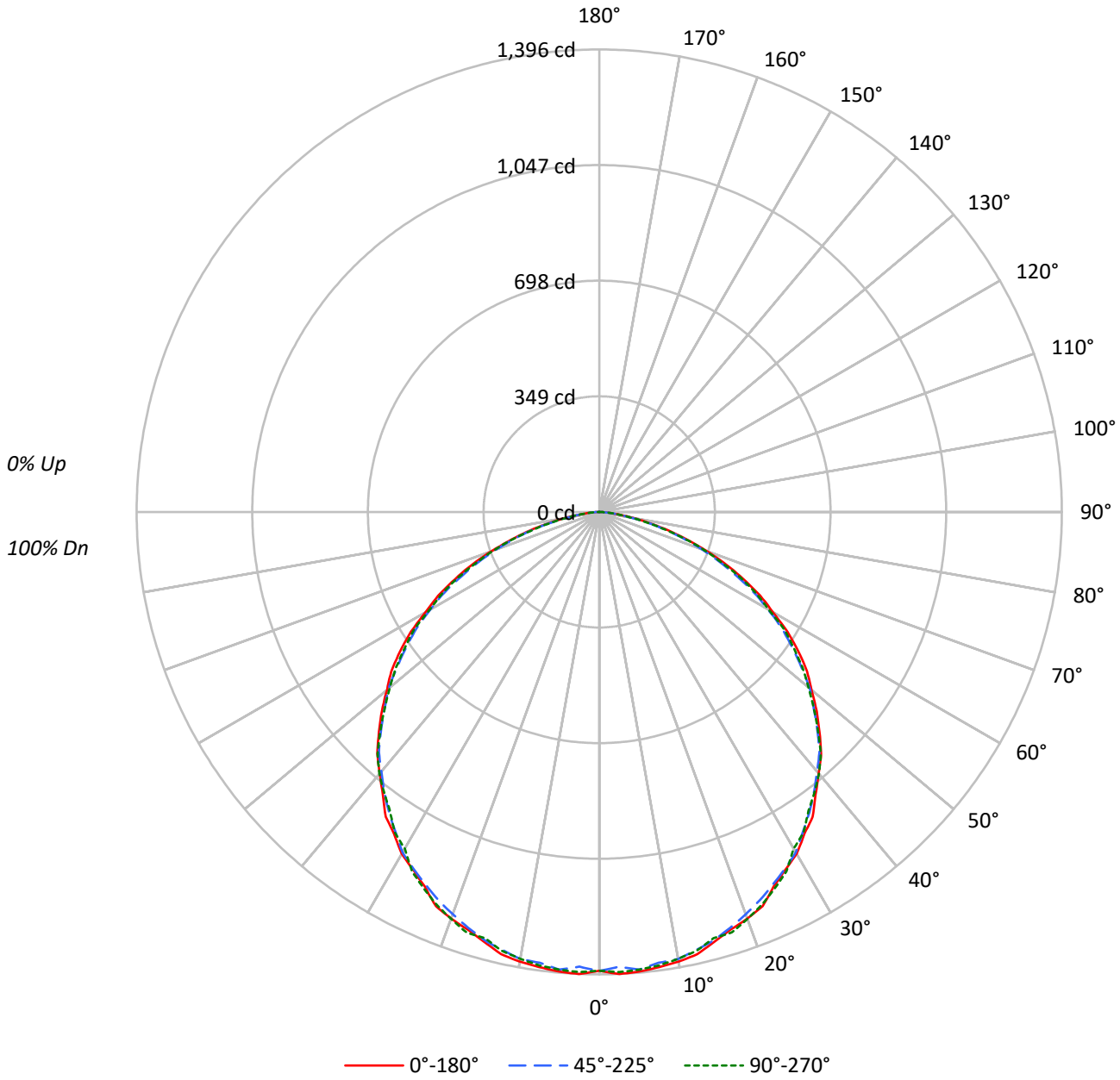
Lumens per Lamp: N/A
Luminaire Lumens: 3844.7 lumens
Efficiency: N/A
Efficacy: 97.6 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.27 / 1.38
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 39.4
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°	3728	3728	3728
5°	3762	3746	3746
10°	3767	3745	3742
15°	3741	3729	3711
20°	3742	3702	3744
25°	3702	3684	3722
30°	3704	3688	3646
35°	3689	3634	3617
40°	3620	3592	3625
45°	3578	3542	3553
50°	3499	3474	3450
55°	3442	3331	3362
60°	3251	3164	3180
65°	3060	2913	3003
70°	2709	2581	2662
75°	2232	2132	2124
80°	1595	1480	1480
85°	778	753	778

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3578 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.6	3.4
10°-20°	377.4	9.8
20°-30°	573.5	14.9
30°-40°	693.3	18.0
40°-50°	718.4	18.7
50°-60°	638.6	16.6
60°-70°	457.9	11.9
70°-80°	218.0	5.7
80°-90°	36.1	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°	1082.5	28.2
0°-40°	1775.8	46.2
0°-60°	3132.8	81.5
0°-90°	3844.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3844.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1385	1385	1385	1385	1385	
5°	1393	1386	1387	1380	1387	132
15°	1343	1338	1338	1331	1332	380
25°	1247	1244	1241	1240	1253	577
35°	1123	1105	1106	1107	1101	698
45°	940	930	931	927	934	725
55°	734	712	710	714	717	652
65°	480	455	458	463	472	474
75°	215	194	205	207	204	228
85°	25	22	24	24	25	38
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1385.2	1385.2	1385.2	1385.2	1385.2
2.5°	1396.3	1388.9	1374.1	1383.7	1390.3
5°	1392.6	1385.9	1386.6	1380.0	1386.6
7.5°	1385.9	1379.2	1372.6	1370.4	1380.7
10°	1378.5	1365.9	1370.4	1365.2	1369.6
12.5°	1367.4	1357.0	1354.1	1347.4	1357.0
15°	1343.0	1338.5	1338.5	1331.1	1331.9
17.5°	1321.5	1312.6	1315.6	1311.9	1331.1
20°	1306.7	1292.6	1292.6	1290.4	1307.4
22.5°	1288.2	1271.9	1268.2	1269.7	1283.0
25°	1246.7	1243.8	1240.8	1240.1	1253.4
27.5°	1217.1	1209.0	1214.1	1211.9	1223.0
30°	1191.9	1177.9	1186.8	1178.6	1173.4
32.5°	1152.0	1146.8	1144.6	1145.3	1147.5
35°	1123.1	1105.3	1106.1	1106.8	1100.9
37.5°	1072.7	1075.0	1065.3	1065.3	1066.8
40°	1030.5	1027.6	1022.4	1022.4	1032.0
42.5°	991.3	978.0	983.9	975.0	989.8
45°	940.2	929.9	930.6	926.9	933.6
47.5°	889.9	881.0	878.0	881.0	878.0
50°	835.8	829.9	829.9	827.0	824.0
52.5°	790.7	769.9	768.5	772.9	773.6
55°	733.7	711.5	710.0	713.7	716.6
57.5°	673.7	647.8	653.0	658.9	662.6
60°	604.1	585.6	587.8	597.4	590.8
62.5°	547.8	522.7	526.4	534.5	534.5
65°	480.5	454.6	457.5	463.4	471.6
67.5°	415.3	387.9	392.4	399.0	401.3
70°	344.3	315.4	328.0	334.6	338.3
72.5°	276.1	253.9	265.0	268.7	271.7
75°	214.7	194.0	205.1	206.6	204.3
77.5°	152.5	137.7	146.6	149.5	147.3
80°	102.9	88.1	95.5	97.7	95.5
82.5°	56.3	51.8	54.8	55.5	54.0
85°	25.2	22.2	24.4	24.4	25.2
87.5°	7.4	6.7	6.7	7.4	6.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)