

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: P687848

Luminaire Tested: FLR-HA-22-L3C3 (MED)-50-CA08

Issue Date: 5/22/2023

Test Information

Test Method: LM-79-2019
Report Number: P687848
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2303-938-1)
Test Lab: INNOVATION CENTER
Issue Date: 5/22/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FLR-HA-22-L3C3 (MED)-50-CA08
Description: Fail-Safe - FLR Fully Luminous Recessed 2X2 5000K Luminaire at Midium Lumen setting for High Abuse
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

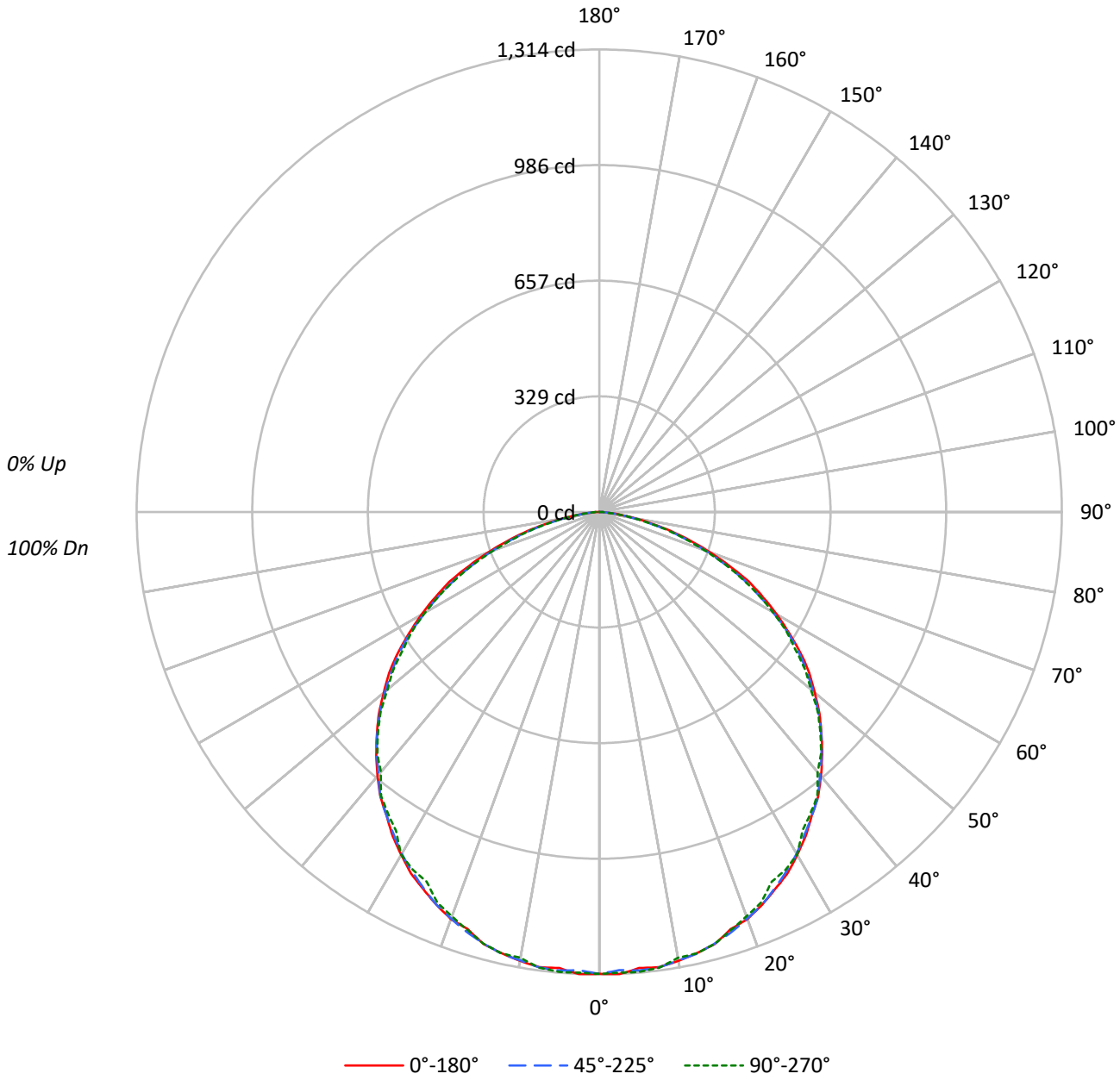
Lumens per Lamp: N/A
Luminaire Lumens: 3686.4 lumens
Efficiency: N/A
Efficacy: 122.5 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.26 / 1.39
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 30.1
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	102	99	95	98	95	92	94	92	89	91	89	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	69	64	73	68	63	70	66	62	60
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53	51
5	76	64	55	48	74	62	54	48	60	53	47	58	52	47	57	51	46	44
6	70	57	48	42	69	56	48	42	54	47	41	53	46	41	51	45	41	39
7	65	52	43	37	64	51	43	37	49	42	37	48	41	36	47	41	36	34
8	61	47	39	33	59	47	38	33	45	38	33	44	37	32	43	37	32	30
9	57	43	35	30	55	43	35	30	42	34	29	41	34	29	40	34	29	27
10	53	40	32	27	52	39	32	27	38	31	27	38	31	27	37	31	26	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3532	3532	3532
5°	3515	3532	3543
10°	3539	3535	3515
15°	3540	3536	3538
20°	3525	3521	3502
25°	3511	3503	3442
30°	3495	3485	3493
35°	3458	3460	3437
40°	3442	3426	3388
45°	3398	3393	3381
50°	3345	3320	3284
55°	3276	3245	3183
60°	3134	3066	3066
65°	2991	2869	2839
70°	2633	2528	2496
75°	2197	2087	2108
80°	1571	1478	1468
85°	818	756	797

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 3406 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.4	3.4
10°-20°	357.6	9.7
20°-30°	544.1	14.8
30°-40°	659.2	17.9
40°-50°	686.4	18.6
50°-60°	614.6	16.7
60°-70°	446.2	12.1
70°-80°	216.6	5.9
80°-90°	37.3	1.0
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°	1026.1	27.8
0°-40°	1685.2	45.7
0°-60°	2986.2	81.0
0°-90°	3686.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3686.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1312	1312	1312	1312	1312	
5°	1301	1309	1308	1305	1312	124
15°	1271	1268	1269	1260	1270	358
25°	1182	1185	1180	1178	1159	546
35°	1053	1059	1053	1057	1046	661
45°	893	895	892	887	888	689
55°	698	693	692	684	678	622
65°	470	457	450	449	446	458
75°	211	207	201	201	203	225
85°	26	27	24	24	26	39
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1312.4	1312.4	1312.4	1312.4	1312.4
2.5°	1314.4	1313.7	1303.1	1307.7	1310.4
5°	1301.1	1309.1	1307.7	1305.1	1311.7
7.5°	1304.4	1301.1	1305.1	1304.4	1305.8
10°	1295.2	1291.8	1293.8	1294.5	1286.5
12.5°	1283.9	1281.9	1285.2	1287.9	1284.6
15°	1270.6	1268.0	1269.3	1260.0	1270.0
17.5°	1242.8	1249.4	1251.4	1246.1	1245.5
20°	1230.9	1228.9	1229.6	1227.6	1222.9
22.5°	1208.4	1216.3	1208.4	1204.4	1201.1
25°	1182.5	1185.2	1179.9	1177.9	1159.3
27.5°	1158.0	1157.4	1151.4	1151.4	1146.1
30°	1124.9	1120.3	1121.6	1116.3	1124.2
32.5°	1091.8	1092.4	1086.5	1088.5	1073.9
35°	1052.7	1058.6	1053.3	1056.7	1046.1
37.5°	1020.9	1016.9	1020.9	1015.6	1017.6
40°	979.8	978.5	975.2	976.5	964.6
42.5°	937.4	935.4	934.8	932.1	932.8
45°	893.0	895.0	891.7	887.1	888.4
47.5°	848.6	850.6	844.7	838.7	842.7
50°	799.0	800.3	793.0	791.0	784.4
52.5°	751.9	746.0	742.0	738.7	738.0
55°	698.3	693.0	691.6	683.7	678.4
57.5°	638.6	637.3	633.3	627.4	630.0
60°	582.3	577.0	569.7	568.4	569.7
62.5°	524.7	518.7	509.4	512.1	509.4
65°	469.7	457.1	450.5	449.2	445.9
67.5°	399.5	390.2	384.9	382.9	384.2
70°	334.6	333.9	321.3	319.3	317.3
72.5°	271.6	266.3	259.0	258.4	257.7
75°	211.3	206.7	200.7	201.4	202.7
77.5°	152.4	147.7	142.4	144.4	141.8
80°	101.4	100.0	95.4	94.7	94.7
82.5°	60.3	57.6	55.0	55.0	55.6
85°	26.5	27.2	24.5	24.5	25.8
87.5°	6.6	7.3	6.6	6.6	6.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)