

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: P688208

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

Issue Date: 5/22/2023

Test Information

Test Method: LM-79-2019
Report Number: P688208
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 (MED)-50-CP187
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

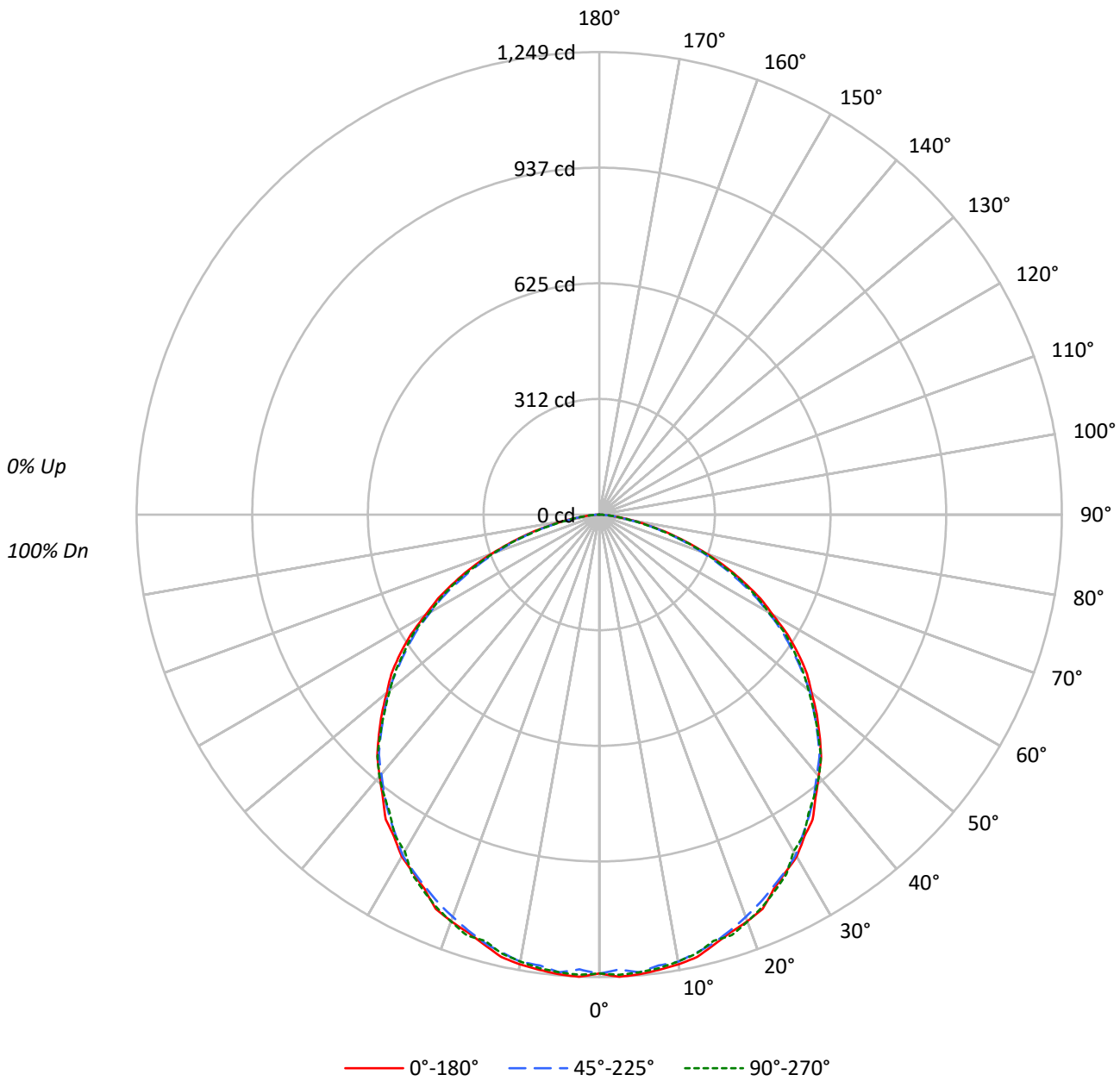
Lumens per Lamp: N/A
Luminaire Lumens: 3440.0 lumens
Efficiency: N/A
Efficacy: 114.3 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.27 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	3335	3335	3335
5°	3366	3351	3351
10°	3370	3350	3348
15°	3348	3336	3320
20°	3348	3312	3350
25°	3312	3296	3330
30°	3314	3299	3262
35°	3301	3251	3236
40°	3239	3214	3244
45°	3201	3169	3179
50°	3131	3108	3086
55°	3080	2980	3008
60°	2909	2830	2845
65°	2737	2607	2686
70°	2423	2308	2382
75°	1997	1908	1901
80°	1427	1323	1323
85°	695	676	695

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3201 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.7	3.4
10°-20°	337.7	9.8
20°-30°	513.1	14.9
30°-40°	620.3	18.0
40°-50°	642.8	18.7
50°-60°	571.3	16.6
60°-70°	409.7	11.9
70°-80°	195.0	5.7
80°-90°	32.3	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°	968.5	28.2
0°-40°	1588.8	46.2
0°-60°	2802.9	81.5
0°-90°	3440.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3440.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1239	1239	1239	1239	1239	
5°	1246	1240	1241	1235	1241	118
15°	1202	1198	1198	1191	1192	340
25°	1116	1113	1110	1110	1121	516
35°	1005	989	990	990	985	625
45°	841	832	833	829	835	649
55°	656	637	635	638	641	584
65°	430	407	409	415	422	424
75°	192	174	184	185	183	204
85°	22	20	22	22	22	34
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1239.3	1239.3	1239.3	1239.3	1239.3
2.5°	1249.3	1242.6	1229.4	1238.0	1244.0
5°	1246.0	1240.0	1240.7	1234.7	1240.7
7.5°	1240.0	1234.0	1228.1	1226.1	1235.4
10°	1233.4	1222.1	1226.1	1221.5	1225.4
12.5°	1223.4	1214.2	1211.5	1205.6	1214.2
15°	1201.6	1197.6	1197.6	1191.0	1191.6
17.5°	1182.4	1174.4	1177.1	1173.8	1191.0
20°	1169.1	1156.5	1156.5	1154.6	1169.8
22.5°	1152.6	1138.0	1134.7	1136.0	1147.9
25°	1115.5	1112.8	1110.2	1109.5	1121.4
27.5°	1089.0	1081.7	1086.3	1084.3	1094.3
30°	1066.5	1053.9	1061.8	1054.5	1049.9
32.5°	1030.7	1026.0	1024.1	1024.7	1026.7
35°	1004.8	989.0	989.6	990.3	985.0
37.5°	959.8	961.8	953.2	953.2	954.5
40°	922.1	919.4	914.8	914.8	923.4
42.5°	886.9	875.0	880.3	872.4	885.6
45°	841.2	832.0	832.6	829.3	835.3
47.5°	796.2	788.2	785.6	788.2	785.6
50°	747.8	742.5	742.5	739.9	737.2
52.5°	707.4	688.9	687.6	691.5	692.2
55°	656.4	636.6	635.2	638.5	641.2
57.5°	602.8	579.6	584.2	589.5	592.8
60°	540.5	524.0	525.9	534.6	528.6
62.5°	490.2	467.6	471.0	478.2	478.2
65°	429.9	406.7	409.4	414.7	421.9
67.5°	371.6	347.1	351.1	357.0	359.0
70°	308.0	282.2	293.4	299.4	302.7
72.5°	247.1	227.2	237.1	240.4	243.1
75°	192.1	173.5	183.5	184.8	182.8
77.5°	136.5	123.2	131.2	133.8	131.8
80°	92.1	78.8	85.4	87.4	85.4
82.5°	50.3	46.4	49.0	49.7	48.4
85°	22.5	19.9	21.9	21.9	22.5
87.5°	6.6	6.0	6.0	6.6	6.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)