

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: P688206

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

Issue Date: 5/22/2023

Test Information

Test Method: LM-79-2019
Report Number: P688206
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)-35-CP187
Description: Fail-Safe - FLR Fully Luminous Recessed 2X2 3500K Luminaire at Midium Lumen setting for High Abuse
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

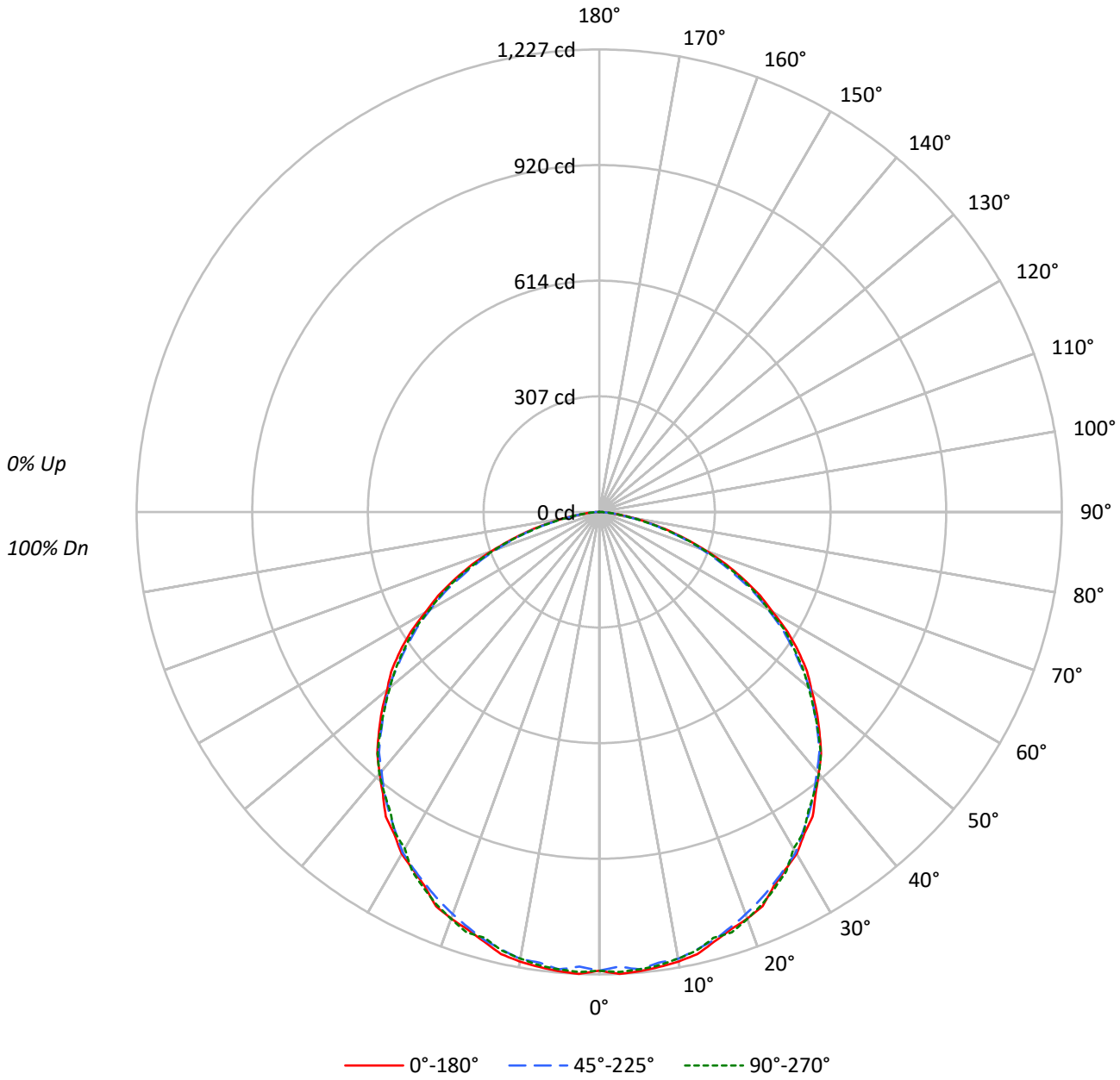
Lumens per Lamp: N/A
Luminaire Lumens: 3378.5 lumens
Efficiency: N/A
Efficacy: 111.9 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.27 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 30.2
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	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100
1	109	105	101	97	107	103	99	95	98	95	92	94	92	90	91	89	87	85	85	85
2	100	92	85	79	97	90	84	79	86	81	77	83	79	75	80	76	73	71	71	71
3	91	81	73	66	88	79	72	66	76	70	64	73	68	63	71	66	62	60	60	60
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51	51	51
5	77	64	55	48	74	63	54	48	61	53	48	59	52	47	57	51	47	44	44	44
6	71	57	49	42	69	57	48	42	55	47	42	53	46	41	51	46	41	39	39	39
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34	34	34
8	61	48	39	33	59	47	39	33	45	38	33	44	38	33	43	37	33	31	31	31
9	57	44	35	30	56	43	35	30	42	35	30	41	34	29	40	34	29	28	28	28
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25	25	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3275	3275	3275
5°	3306	3291	3291
10°	3310	3290	3289
15°	3288	3277	3260
20°	3288	3253	3290
25°	3253	3237	3270
30°	3255	3240	3204
35°	3242	3193	3178
40°	3181	3156	3186
45°	3144	3112	3122
50°	3075	3053	3031
55°	3025	2927	2954
60°	2857	2780	2794
65°	2688	2560	2639
70°	2380	2268	2339
75°	1962	1874	1867
80°	1401	1300	1300
85°	682	664	682

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3144 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.6	3.4
10°-20°	331.6	9.8
20°-30°	504.0	14.9
30°-40°	609.2	18.0
40°-50°	631.3	18.7
50°-60°	561.1	16.6
60°-70°	402.4	11.9
70°-80°	191.5	5.7
80°-90°	31.7	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°	951.2	28.2
0°-40°	1560.4	46.2
0°-60°	2752.9	81.5
0°-90°	3378.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3378.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1217	1217	1217	1217	1217	
5°	1224	1218	1218	1213	1218	116
15°	1180	1176	1176	1170	1170	334
25°	1096	1093	1090	1090	1101	507
35°	987	971	972	973	967	614
45°	826	817	818	814	820	637
55°	645	625	624	627	630	573
65°	422	399	402	407	414	417
75°	189	170	180	182	180	201
85°	22	20	22	22	22	33
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1217.2	1217.2	1217.2	1217.2	1217.2
2.5°	1226.9	1220.4	1207.4	1215.9	1221.7
5°	1223.7	1217.8	1218.5	1212.6	1218.5
7.5°	1217.8	1212.0	1206.1	1204.2	1213.3
10°	1211.3	1200.3	1204.2	1199.6	1203.5
12.5°	1201.6	1192.5	1189.9	1184.0	1192.5
15°	1180.1	1176.2	1176.2	1169.7	1170.3
17.5°	1161.2	1153.4	1156.0	1152.8	1169.7
20°	1148.2	1135.9	1135.9	1133.9	1148.9
22.5°	1132.0	1117.6	1114.4	1115.7	1127.4
25°	1095.5	1092.9	1090.3	1089.7	1101.4
27.5°	1069.5	1062.4	1066.9	1065.0	1074.7
30°	1047.4	1035.0	1042.8	1035.7	1031.1
32.5°	1012.3	1007.7	1005.8	1006.4	1008.4
35°	986.9	971.3	971.9	972.6	967.4
37.5°	942.6	944.6	936.1	936.1	937.4
40°	905.6	903.0	898.4	898.4	906.9
42.5°	871.1	859.4	864.6	856.8	869.8
45°	826.2	817.1	817.7	814.5	820.3
47.5°	782.0	774.2	771.6	774.2	771.6
50°	734.5	729.3	729.3	726.7	724.1
52.5°	694.8	676.6	675.3	679.2	679.8
55°	644.7	625.2	623.9	627.1	629.7
57.5°	592.0	569.2	573.8	579.0	582.2
60°	530.9	514.6	516.5	525.0	519.1
62.5°	481.4	459.3	462.5	469.7	469.7
65°	422.2	399.4	402.0	407.2	414.4
67.5°	365.0	340.9	344.8	350.6	352.6
70°	302.5	277.1	288.2	294.0	297.3
72.5°	242.7	223.1	232.9	236.2	238.8
75°	188.7	170.4	180.2	181.5	179.6
77.5°	134.0	121.0	128.8	131.4	129.5
80°	90.4	77.4	83.9	85.9	83.9
82.5°	49.4	45.5	48.1	48.8	47.5
85°	22.1	19.5	21.5	21.5	22.1
87.5°	6.5	5.9	5.9	6.5	5.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)