

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: P688207

Luminaire Tested: FLR-HA-22-L3C3 (MED)-40-CP187

Issue Date: 5/22/2023

Test Information

Test Method: LM-79-2019
Report Number: P688207
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)-40-CP187
Description: Fail-Safe - FLR Fully Luminous Recessed 2X2 4000K Luminaire at Midium Lumen setting for High Abuse
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

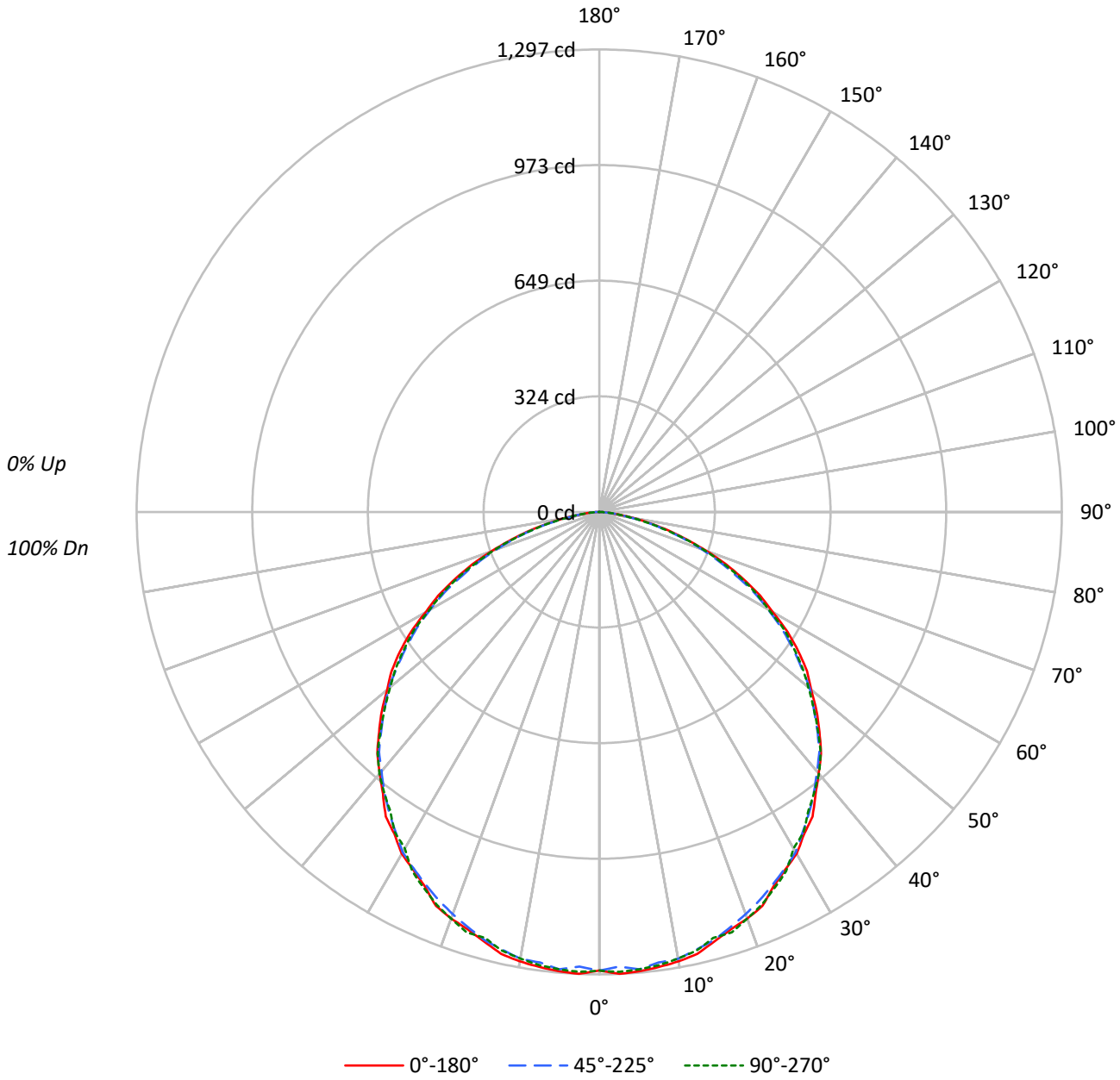
Lumens per Lamp: N/A
Luminaire Lumens: 3570.3 lumens
Efficiency: N/A
Efficacy: 123.5 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.27 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 28.9
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°	3461	3461	3461
5°	3493	3478	3478
10°	3498	3477	3475
15°	3474	3463	3446
20°	3475	3438	3477
25°	3437	3421	3456
30°	3439	3424	3386
35°	3426	3374	3358
40°	3362	3335	3367
45°	3323	3289	3299
50°	3249	3226	3203
55°	3196	3093	3122
60°	3019	2938	2953
65°	2841	2706	2788
70°	2515	2397	2472
75°	2073	1980	1972
80°	1481	1375	1375
85°	722	701	722

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3323 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.2	3.4
10°-20°	350.4	9.8
20°-30°	532.6	14.9
30°-40°	643.8	18.0
40°-50°	667.1	18.7
50°-60°	593.0	16.6
60°-70°	425.2	11.9
70°-80°	202.4	5.7
80°-90°	33.5	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°	1005.2	28.2
0°-40°	1649.0	46.2
0°-60°	2909.1	81.5
0°-90°	3570.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3570.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1286	1286	1286	1286	1286	
5°	1293	1287	1288	1282	1288	123
15°	1247	1243	1243	1236	1237	353
25°	1158	1155	1152	1152	1164	536
35°	1043	1026	1027	1028	1022	648
45°	873	864	864	861	867	673
55°	681	661	659	663	666	606
65°	446	422	425	430	438	440
75°	199	180	190	192	190	212
85°	23	21	23	23	23	35
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1286.3	1286.3	1286.3	1286.3	1286.3
2.5°	1296.6	1289.7	1276.0	1284.9	1291.1
5°	1293.2	1287.0	1287.7	1281.5	1287.7
7.5°	1287.0	1280.8	1274.6	1272.5	1282.2
10°	1280.1	1268.4	1272.5	1267.7	1271.9
12.5°	1269.8	1260.2	1257.4	1251.2	1260.2
15°	1247.1	1243.0	1243.0	1236.1	1236.8
17.5°	1227.2	1218.9	1221.7	1218.2	1236.1
20°	1213.4	1200.4	1200.4	1198.3	1214.1
22.5°	1196.2	1181.1	1177.7	1179.0	1191.4
25°	1157.7	1155.0	1152.2	1151.5	1163.9
27.5°	1130.2	1122.7	1127.5	1125.4	1135.7
30°	1106.9	1093.8	1102.0	1094.5	1089.7
32.5°	1069.7	1064.9	1062.9	1063.5	1065.6
35°	1042.9	1026.4	1027.1	1027.8	1022.3
37.5°	996.2	998.2	989.3	989.3	990.7
40°	957.0	954.2	949.4	949.4	958.4
42.5°	920.5	908.2	913.7	905.4	919.2
45°	873.1	863.5	864.2	860.7	866.9
47.5°	826.4	818.1	815.4	818.1	815.4
50°	776.2	770.7	770.7	767.9	765.2
52.5°	734.2	715.0	713.6	717.7	718.4
55°	681.3	660.7	659.3	662.7	665.5
57.5°	625.6	601.6	606.4	611.9	615.3
60°	561.0	543.8	545.9	554.8	548.6
62.5°	508.7	485.4	488.8	496.4	496.4
65°	446.2	422.1	424.9	430.4	437.9
67.5°	385.7	360.2	364.4	370.6	372.6
70°	319.7	292.9	304.6	310.7	314.2
72.5°	256.4	235.8	246.1	249.6	252.3
75°	199.4	180.1	190.4	191.8	189.7
77.5°	141.6	127.9	136.1	138.9	136.8
80°	95.6	81.8	88.7	90.7	88.7
82.5°	52.2	48.1	50.9	51.6	50.2
85°	23.4	20.6	22.7	22.7	23.4
87.5°	6.9	6.2	6.2	6.9	6.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)