

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: P688018

Luminaire Tested: FLR-HA-22-35-40-CP375

Issue Date: 5/22/2023

Test Information

Test Method: LM-79-2019
Report Number: P688018
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2207-724-15)
Test Lab: INNOVATION CENTER
Issue Date: 5/22/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FLR-HA-22-35-40-CP375
Description: Fail-Safe - FLR Fully Luminous Recessed 2X2 4000K Luminaire for High Abuse
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

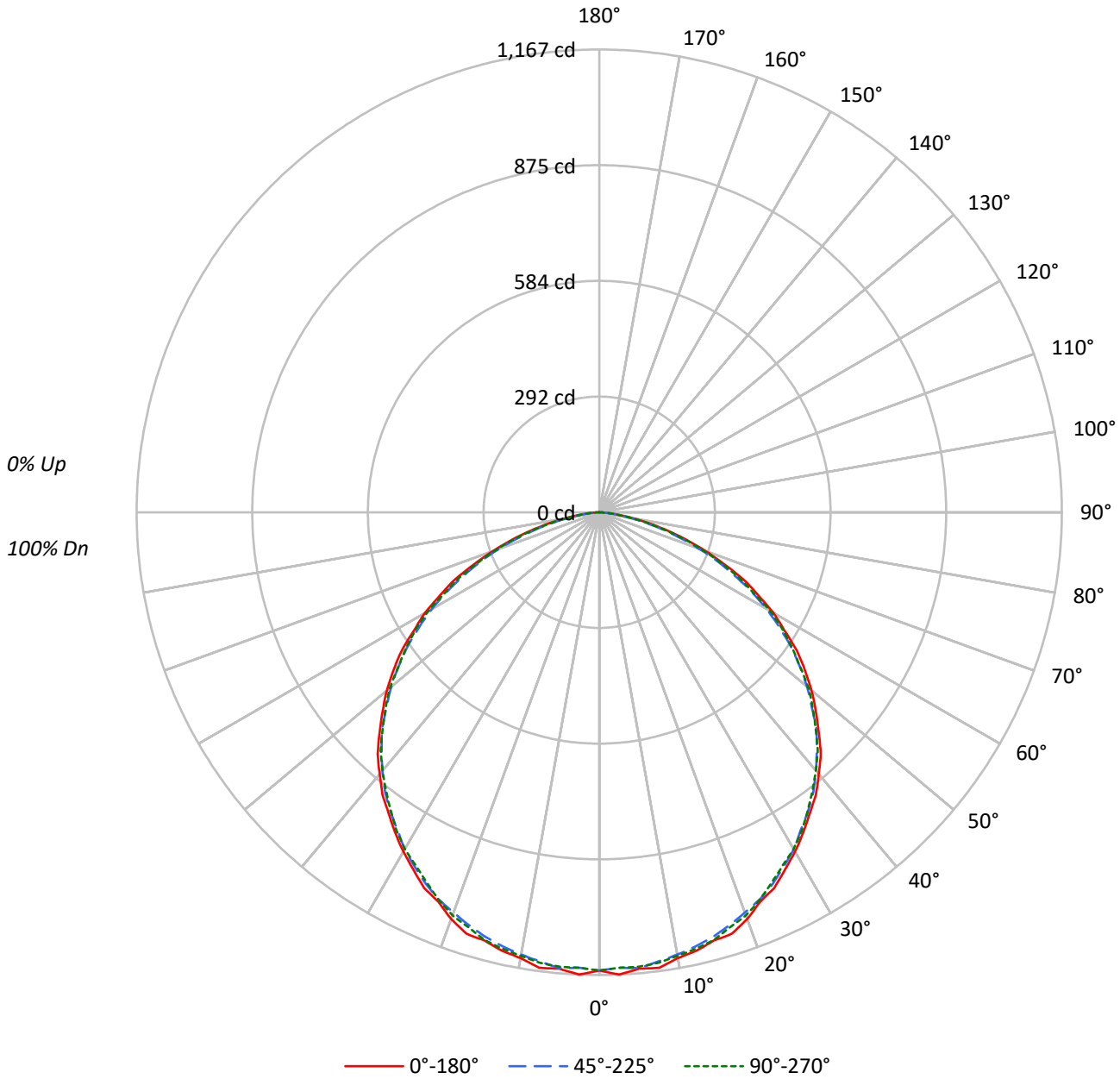
Lumens per Lamp: N/A
Luminaire Lumens: 3184.4 lumens
Efficiency: N/A
Efficacy: 101.4 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.26 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 31.4
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	50	30	10
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	96	98	95	93	94	92	90	91	89	87	85		
2	100	92	85	80	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	65	73	68	63	71	66	62	60		
4	83	72	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51		
5	77	64	55	48	75	63	54	48	61	53	48	59	52	47	57	51	47	45		
6	71	58	49	42	69	57	48	42	55	47	42	53	46	41	52	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	46	38	33	44	38	33	43	37	33	31		
9	57	44	35	30	56	43	35	30	42	35	30	41	34	30	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°	3109	3109	3109
5°	3121	3118	3107
10°	3119	3095	3103
15°	3115	3088	3111
20°	3125	3076	3098
25°	3103	3071	3058
30°	3071	3049	3047
35°	3043	3020	3013
40°	3027	2989	2987
45°	2980	2949	2939
50°	2928	2868	2886
55°	2854	2768	2783
60°	2732	2620	2681
65°	2560	2394	2471
70°	2242	2097	2177
75°	1856	1672	1764
80°	1314	1178	1226
85°	664	587	627

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2980 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.3	3.4
10°-20°	313.9	9.9
20°-30°	476.6	15.0
30°-40°	575.2	18.1
40°-50°	596.3	18.7
50°-60°	528.2	16.6
60°-70°	377.1	11.8
70°-80°	178.6	5.6
80°-90°	29.3	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°	899.8	28.3
0°-40°	1475.0	46.3
0°-60°	2599.5	81.6
0°-90°	3184.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3184.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1155	1155	1155	1155	1155	
5°	1155	1150	1154	1146	1150	110
15°	1118	1112	1108	1115	1117	317
25°	1045	1028	1034	1035	1030	480
35°	926	917	919	915	917	581
45°	783	772	775	772	772	605
55°	608	591	590	588	593	541
65°	402	376	376	379	388	393
75°	178	164	161	165	170	190
85°	22	20	19	18	20	32
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1155.4	1155.4	1155.4	1155.4	1155.4
2.5°	1166.7	1146.5	1149.7	1152.2	1149.7
5°	1155.4	1149.7	1154.1	1145.9	1150.3
7.5°	1158.5	1144.6	1142.7	1140.2	1145.9
10°	1141.4	1133.2	1132.6	1137.0	1135.7
12.5°	1132.6	1125.6	1121.8	1122.4	1127.5
15°	1118.0	1111.7	1108.5	1114.8	1116.7
17.5°	1114.2	1092.0	1092.0	1093.3	1097.1
20°	1091.4	1076.9	1074.3	1076.9	1081.9
22.5°	1062.3	1057.2	1057.2	1059.1	1057.9
25°	1045.2	1028.1	1034.4	1035.1	1030.0
27.5°	1015.4	1009.1	1007.8	1005.3	1003.4
30°	988.2	978.1	981.3	981.3	980.6
32.5°	957.8	950.9	947.7	948.3	951.5
35°	926.2	916.7	919.2	915.4	917.3
37.5°	897.7	885.0	887.6	885.7	883.8
40°	861.6	851.5	850.8	847.7	850.2
42.5°	827.4	812.9	812.2	812.9	816.0
45°	783.1	771.7	774.9	772.3	772.3
47.5°	740.7	733.1	727.4	728.0	730.6
50°	699.5	685.0	685.0	679.9	689.4
52.5°	654.0	639.4	637.5	639.4	638.1
55°	608.4	591.3	590.0	587.5	593.2
57.5°	553.3	536.8	538.1	539.4	547.6
60°	507.7	485.6	486.8	488.1	498.2
62.5°	451.4	433.0	432.4	434.3	436.8
65°	402.0	376.0	376.0	378.6	388.1
67.5°	339.3	323.5	322.9	326.0	329.8
70°	284.9	266.5	266.5	270.3	276.7
72.5°	230.4	215.2	212.7	218.4	222.8
75°	178.5	164.0	160.8	164.6	169.7
77.5°	127.9	118.4	115.9	119.7	120.9
80°	84.8	76.6	76.0	77.9	79.1
82.5°	48.7	43.7	41.8	43.7	44.3
85°	21.5	19.6	19.0	18.4	20.3
87.5°	5.1	5.1	5.1	5.1	5.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)