

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: P590253

Luminaire Tested: FSR-24-2-LD4-2LO-35-UNV-93-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590253
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-2LO-35-UNV-93-84-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2920.0 lumens
Efficiency: N/A
Efficacy: 124.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

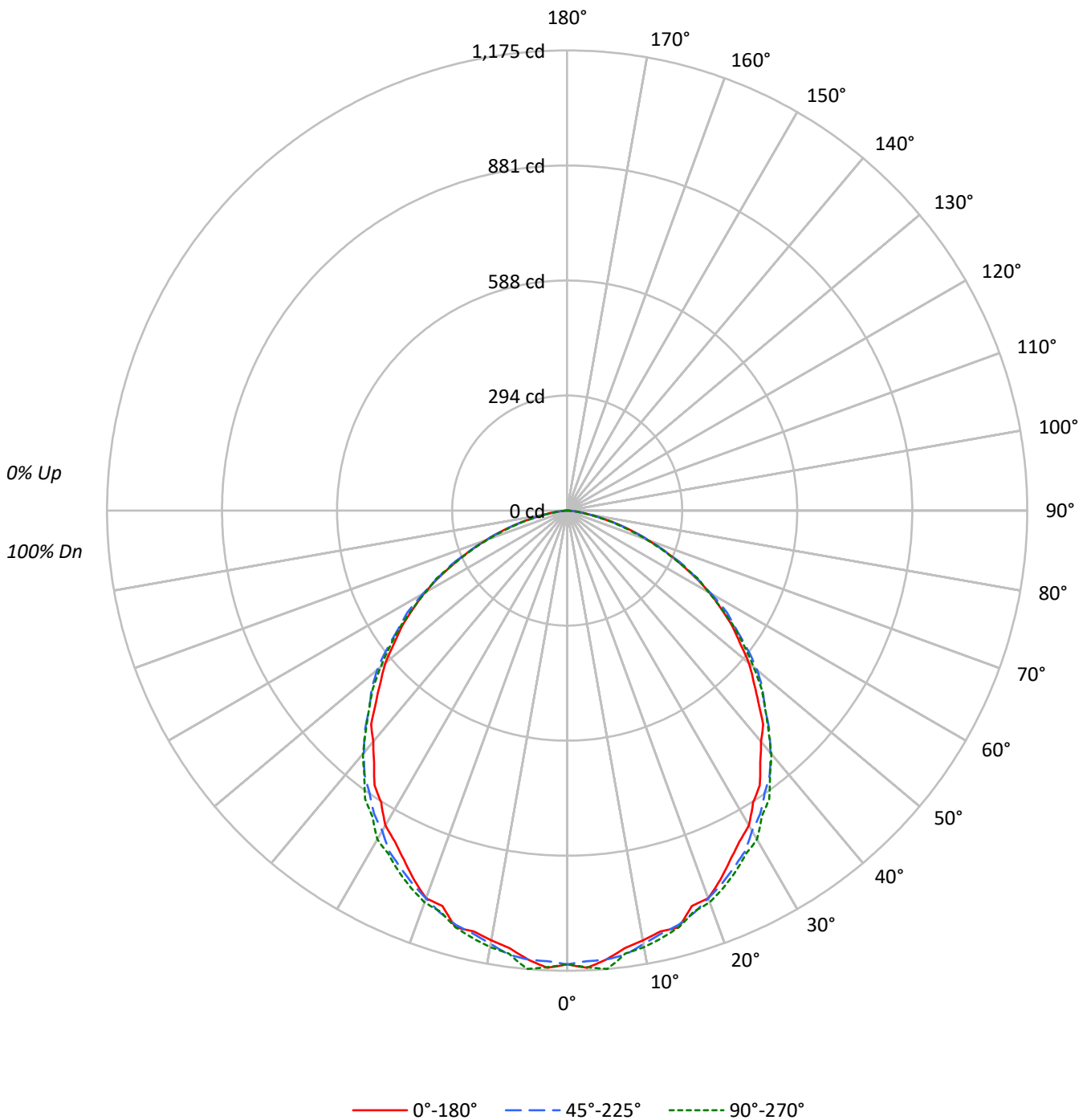
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3118	3118	3118
5°	3108	3109	3174
10°	3045	3071	3093
15°	3068	3052	3069
20°	3017	3017	3049
25°	2924	2988	3021
30°	2884	2935	3013
35°	2816	2890	2954
40°	2706	2837	2849
45°	2624	2718	2722
50°	2538	2653	2602
55°	2419	2465	2448
60°	2261	2284	2243
65°	2017	2068	2002
70°	1730	1736	1688
75°	1370	1367	1314
80°	917	893	857
85°	500	494	463

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2788 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.0	3.7
10°-20°	308.9	10.6
20°-30°	462.8	15.8
30°-40°	548.4	18.8
40°-50°	549.5	18.8
50°-60°	466.4	16.0
60°-70°	314.5	10.8
70°-80°	138.2	4.7
80°-90°	22.5	0.8
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°	880.6	30.2
0°-40°	1429.0	48.9
0°-60°	2444.9	83.7
0°-90°	2920.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2920.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1159	1159	1159	1159	1159	
5°	1150	1148	1151	1147	1175	108
15°	1101	1089	1096	1101	1102	307
25°	985	990	1006	1020	1017	455
35°	857	860	880	900	899	532
45°	690	702	714	732	715	533
55°	516	512	526	522	522	459
65°	317	312	325	312	314	315
75°	132	129	132	122	126	141
85°	16	16	16	16	15	23
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1158.6	1158.6	1158.6	1158.6	1158.6
2.5°	1168.6	1159.8	1151.6	1161.1	1167.0
5°	1150.4	1147.7	1150.8	1147.4	1175.0
7.5°	1126.7	1137.0	1143.0	1139.3	1140.9
10°	1114.2	1110.6	1123.9	1133.2	1131.8
12.5°	1100.7	1106.1	1106.8	1116.8	1117.7
15°	1101.4	1088.7	1095.5	1101.1	1101.6
17.5°	1058.7	1072.4	1077.1	1090.1	1073.9
20°	1053.4	1043.4	1053.4	1066.7	1064.6
22.5°	1021.3	1010.0	1031.6	1043.4	1042.6
25°	984.8	990.1	1006.3	1019.5	1017.4
27.5°	952.7	959.0	982.1	1000.2	988.5
30°	928.1	924.9	944.4	960.5	969.5
32.5°	883.9	895.3	918.0	934.0	925.5
35°	857.2	859.7	879.6	899.9	899.3
37.5°	810.3	822.2	850.1	855.8	850.6
40°	770.4	782.2	807.5	813.6	811.1
42.5°	740.9	743.0	764.7	771.7	760.5
45°	689.6	702.5	714.1	732.5	715.2
47.5°	645.9	651.9	677.0	682.0	672.9
50°	606.3	608.4	633.7	627.5	621.6
52.5°	556.5	565.3	579.5	578.3	571.3
55°	515.5	512.0	525.5	521.9	521.8
57.5°	466.3	472.3	483.3	477.6	468.5
60°	420.2	420.4	424.4	418.0	416.8
62.5°	368.9	370.7	371.6	363.7	376.5
65°	316.7	312.5	324.8	312.3	314.4
67.5°	268.7	270.8	269.6	261.8	264.8
70°	219.9	222.6	220.6	211.8	214.5
72.5°	175.3	172.0	174.1	163.1	168.1
75°	131.8	129.1	131.5	122.2	126.4
77.5°	89.8	91.8	90.4	85.4	88.3
80°	59.2	57.6	57.6	54.8	55.3
82.5°	34.6	32.9	32.5	31.6	32.9
85°	16.2	15.7	16.0	15.6	15.0
87.5°	5.8	6.0	6.0	5.7	5.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)