

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: P560672

Luminaire Tested: FSR-12-2-LD4-2STD-40-UNV-93-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560672
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-12-2-LD4-2STD-40-UNV-93-84-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2594.0 lumens
Efficiency: N/A
Efficacy: 77.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

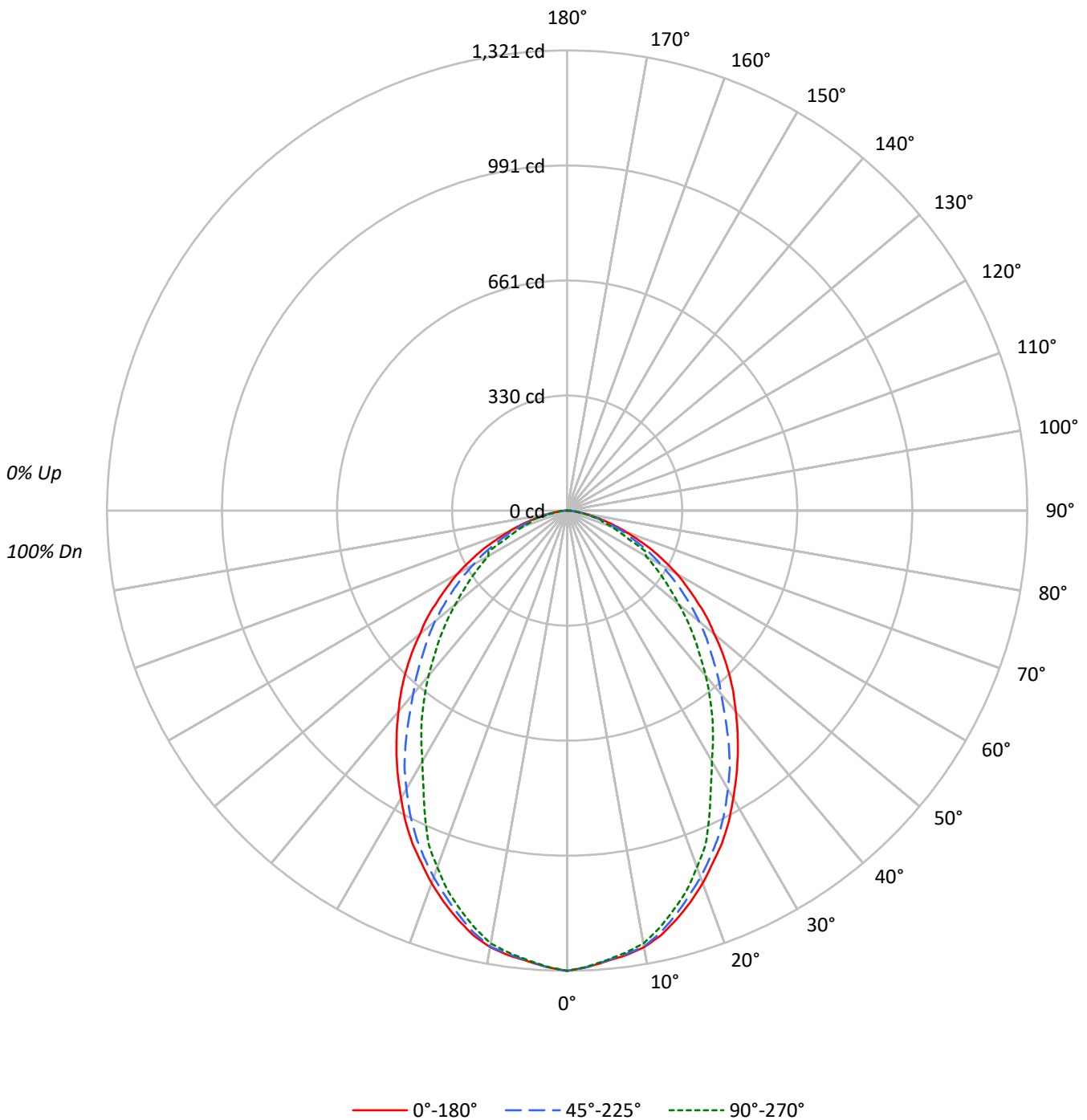
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																												
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																												
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																												
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																												
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																												
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																												
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																												
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																												
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																												
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7111	7111	7111
5°	7015	7007	6998
10°	6954	6945	6896
15°	6766	6698	6605
20°	6518	6413	6238
25°	6250	6114	5733
30°	5924	5734	5164
35°	5610	5299	4777
40°	5291	4829	4347
45°	4988	4465	3930
50°	4618	4144	3505
55°	4271	3755	3139
60°	3914	3354	2812
65°	3443	2938	2490
70°	2837	2573	2115
75°	2256	1969	2065
80°	1516	1420	1327
85°	945	1130	1321

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4988 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.0	4.7
10°-20°	337.6	13.0
20°-30°	467.3	18.0
30°-40°	498.3	19.2
40°-50°	454.6	17.5
50°-60°	356.1	13.7
60°-70°	232.1	8.9
70°-80°	102.8	4.0
80°-90°	22.1	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°	927.9	35.8
0°-40°	1426.2	55.0
0°-60°	2237.0	86.2
0°-90°	2594.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2594.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1321	1321	1321	1321	1321	
5°	1298	1297	1297	1295	1295	123
15°	1214	1214	1202	1190	1185	341
25°	1052	1046	1030	993	965	483
35°	854	848	807	746	727	534
45°	655	642	587	538	516	505
55°	455	442	400	353	334	408
65°	270	255	231	235	196	266
75°	108	101	95	90	99	116
85°	15	17	18	20	21	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1321.3	1321.3	1321.3	1321.3	1321.3
2.5°	1312.2	1312.2	1312.2	1310.7	1310.7
5°	1298.4	1296.9	1296.9	1295.4	1295.4
7.5°	1287.7	1286.2	1284.7	1283.2	1280.1
10°	1272.5	1272.5	1270.9	1263.3	1261.8
12.5°	1248.0	1246.5	1240.4	1229.7	1226.6
15°	1214.4	1214.4	1202.2	1190.0	1185.4
17.5°	1177.8	1176.2	1161.0	1148.7	1142.6
20°	1138.0	1135.0	1119.7	1099.9	1089.2
22.5°	1093.7	1093.7	1075.4	1049.4	1038.7
25°	1052.5	1046.4	1029.6	992.9	965.4
27.5°	1005.1	996.0	977.6	925.7	893.6
30°	953.2	948.6	922.7	855.4	831.0
32.5°	904.3	896.7	869.2	798.9	779.1
35°	853.9	847.8	806.6	745.5	727.1
37.5°	803.5	795.9	743.9	695.0	672.1
40°	753.1	743.9	687.4	643.1	618.7
42.5°	705.7	693.5	638.5	591.2	563.7
45°	655.3	641.6	586.6	537.7	516.3
47.5°	604.9	592.7	542.3	491.9	467.4
50°	551.5	540.8	494.9	444.5	418.6
52.5°	507.2	490.4	446.1	395.6	374.3
55°	455.2	441.5	400.2	352.9	334.5
57.5°	407.9	394.1	355.9	311.6	296.3
60°	363.6	343.7	311.6	273.4	261.2
62.5°	314.7	299.4	271.9	239.8	255.1
65°	270.4	255.1	230.7	235.2	195.5
67.5°	221.5	213.9	192.5	171.1	165.0
70°	180.3	171.1	163.5	140.5	134.4
72.5°	143.6	134.4	123.7	111.5	106.9
75°	108.5	100.8	94.7	90.1	99.3
77.5°	74.9	71.8	67.2	62.6	61.1
80°	48.9	47.4	45.8	44.3	42.8
82.5°	29.0	29.0	29.0	29.0	29.0
85°	15.3	16.8	18.3	19.9	21.4
87.5°	9.2	9.2	10.7	12.2	13.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)