

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: P590353

Luminaire Tested: FSR-24-2-LD4-2STD-35-UNV-93-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590353
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-LD4-2STD-35-UNV-93-88-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3302.0 lumens
Efficiency: N/A
Efficacy: 99.2 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

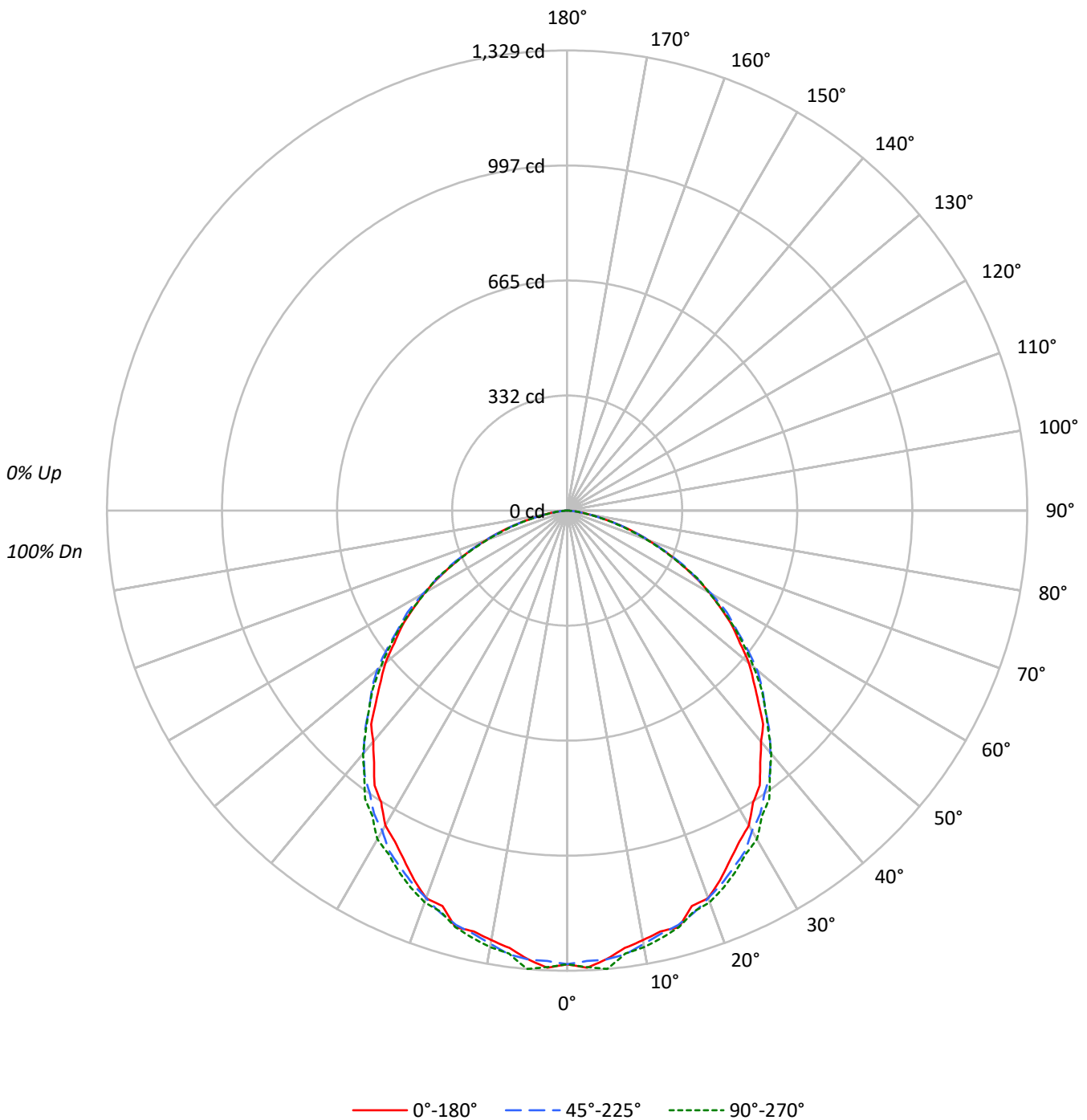
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P590353

CATALOG NUMBER: FSR-24-2-LD4-2STD-35-UNV-93-88-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P590353

CATALOG NUMBER: FSR-24-2-LD4-2STD-35-UNV-93-88-EDD

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°	3526	3526	3526
5°	3514	3515	3589
10°	3443	3473	3497
15°	3470	3451	3470
20°	3411	3411	3448
25°	3306	3379	3416
30°	3261	3318	3407
35°	3184	3268	3341
40°	3060	3208	3222
45°	2968	3073	3078
50°	2870	3000	2943
55°	2735	2788	2768
60°	2558	2583	2537
65°	2280	2338	2264
70°	1957	1963	1909
75°	1549	1546	1486
80°	1038	1009	970
85°	565	559	522

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3153 cd/sqm



TEST NUMBER: P590353

CATALOG NUMBER: FSR-24-2-LD4-2STD-35-UNV-93-88-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.2	3.7
10°-20°	349.3	10.6
20°-30°	523.3	15.8
30°-40°	620.2	18.8
40°-50°	621.3	18.8
50°-60°	527.4	16.0
60°-70°	355.6	10.8
70°-80°	156.2	4.7
80°-90°	25.4	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°	995.8	30.2
0°-40°	1616.0	48.9
0°-60°	2764.8	83.7
0°-90°	3302.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3302.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1310	1310	1310	1310	1310	
5°	1301	1298	1301	1298	1329	123
15°	1246	1231	1239	1245	1246	347
25°	1114	1120	1138	1153	1150	515
35°	969	972	995	1018	1017	602
45°	780	794	808	828	809	603
55°	583	579	594	590	590	519
65°	358	353	367	353	356	356
75°	149	146	149	138	143	160
85°	18	18	18	18	17	27
90°	0	0	0	0	0	



TEST NUMBER: P590353

CATALOG NUMBER: FSR-24-2-LD4-2STD-35-UNV-93-88-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1310.2	1310.2	1310.2	1310.2	1310.2
2.5°	1321.5	1311.5	1302.2	1313.0	1319.6
5°	1300.8	1297.8	1301.4	1297.5	1328.8
7.5°	1274.1	1285.8	1292.6	1288.3	1290.2
10°	1259.9	1255.8	1270.9	1281.4	1279.9
12.5°	1244.7	1250.8	1251.6	1263.0	1264.0
15°	1245.5	1231.2	1238.8	1245.2	1245.7
17.5°	1197.2	1212.7	1218.0	1232.7	1214.4
20°	1191.2	1179.9	1191.2	1206.3	1203.9
22.5°	1154.9	1142.2	1166.5	1179.9	1179.1
25°	1113.6	1119.7	1137.9	1152.8	1150.5
27.5°	1077.4	1084.5	1110.5	1131.0	1117.8
30°	1049.5	1045.9	1067.9	1086.2	1096.3
32.5°	999.6	1012.4	1038.1	1056.2	1046.6
35°	969.3	972.2	994.7	1017.7	1017.0
37.5°	916.3	929.7	961.3	967.8	961.8
40°	871.2	884.5	913.1	920.1	917.2
42.5°	837.9	840.2	864.7	872.7	860.0
45°	779.8	794.4	807.6	828.4	808.8
47.5°	730.4	737.2	765.6	771.2	760.9
50°	685.6	688.0	716.6	709.6	702.9
52.5°	629.3	639.3	655.3	654.0	646.0
55°	582.9	579.0	594.3	590.2	590.0
57.5°	527.3	534.0	546.6	540.1	529.8
60°	475.2	475.3	479.9	472.6	471.3
62.5°	417.2	419.2	420.2	411.2	425.8
65°	358.1	353.4	367.2	353.2	355.6
67.5°	303.8	306.2	304.8	296.0	299.4
70°	248.7	251.7	249.5	239.5	242.6
72.5°	198.3	194.5	196.9	184.4	190.1
75°	149.0	146.0	148.7	138.2	142.9
77.5°	101.5	103.9	102.2	96.6	99.8
80°	67.0	65.1	65.1	61.9	62.6
82.5°	39.1	37.2	36.7	35.7	37.2
85°	18.3	17.8	18.1	17.6	16.9
87.5°	6.6	6.8	6.8	6.4	6.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)