

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: P560718

Luminaire Tested: FSR-12-2-LD4-2STD-50-UNV-81-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560718
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-50-UNV-81-97-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2475.0 lumens
Efficiency: N/A
Efficacy: 74.3 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

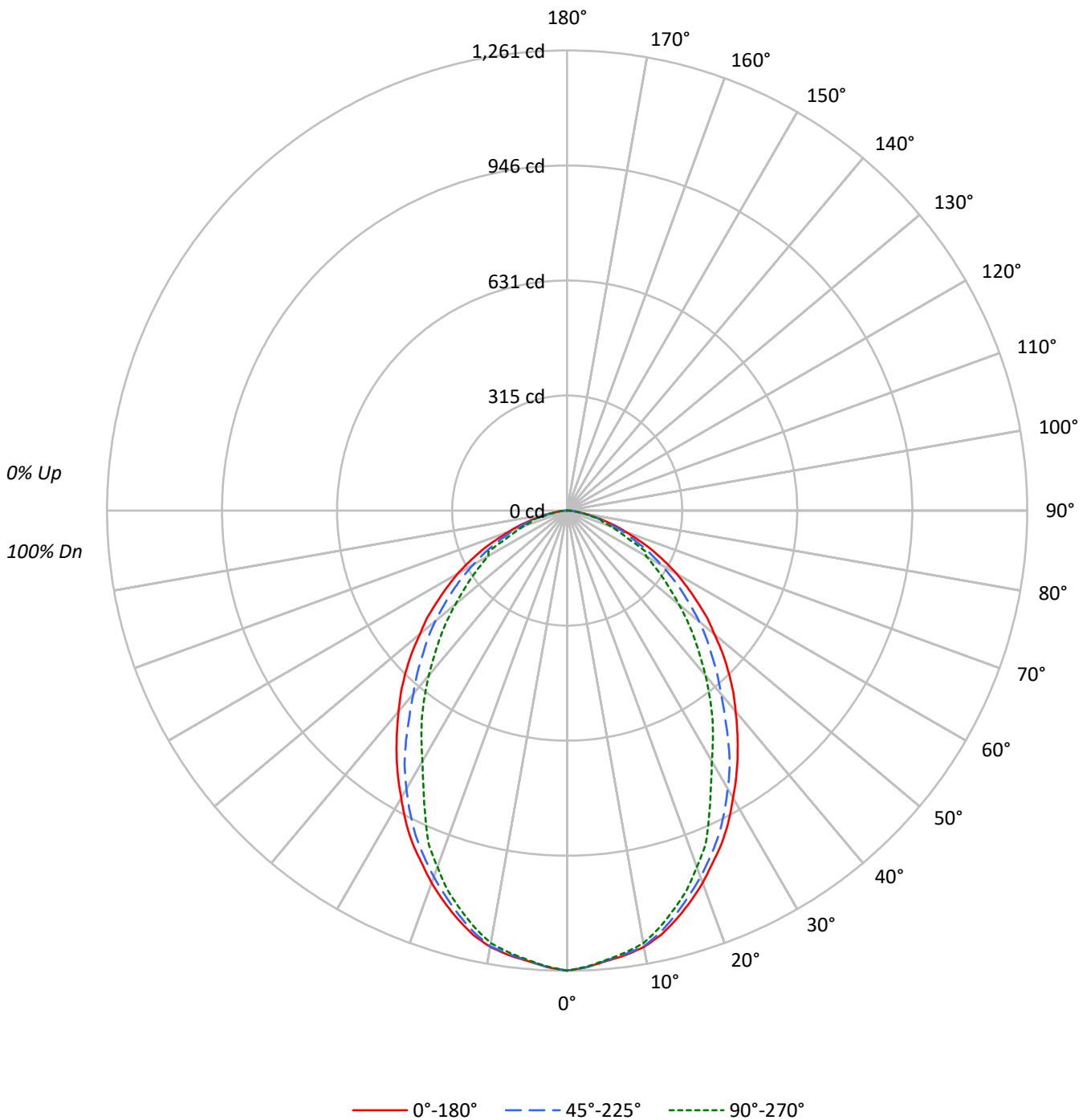
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6785	6785	6785
5°	6693	6685	6678
10°	6635	6627	6579
15°	6456	6391	6302
20°	6219	6119	5952
25°	5963	5834	5470
30°	5652	5471	4928
35°	5353	5056	4558
40°	5048	4608	4147
45°	4759	4260	3749
50°	4406	3954	3344
55°	4075	3583	2995
60°	3734	3200	2682
65°	3286	2803	2376
70°	2707	2455	2019
75°	2152	1880	1969
80°	1444	1354	1265
85°	902	1081	1260

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4759 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.4	4.7
10°-20°	322.1	13.0
20°-30°	445.9	18.0
30°-40°	475.5	19.2
40°-50°	433.8	17.5
50°-60°	339.8	13.7
60°-70°	221.5	8.9
70°-80°	98.1	4.0
80°-90°	21.1	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°	885.3	35.8
0°-40°	1360.8	55.0
0°-60°	2134.3	86.2
0°-90°	2475.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2475.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1261	1261	1261	1261	1261	
5°	1239	1237	1237	1236	1236	118
15°	1159	1159	1147	1135	1131	326
25°	1004	998	982	947	921	461
35°	815	809	770	711	694	509
45°	625	612	560	513	493	482
55°	434	421	382	337	319	390
65°	258	243	220	224	187	254
75°	104	96	90	86	95	111
85°	15	16	18	19	20	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1260.7	1260.7	1260.7	1260.7	1260.7
2.5°	1252.0	1252.0	1252.0	1250.5	1250.5
5°	1238.9	1237.4	1237.4	1236.0	1236.0
7.5°	1228.7	1227.2	1225.8	1224.3	1221.4
10°	1214.1	1214.1	1212.6	1205.3	1203.9
12.5°	1190.8	1189.3	1183.5	1173.3	1170.4
15°	1158.7	1158.7	1147.0	1135.4	1131.0
17.5°	1123.7	1122.3	1107.7	1096.0	1090.2
20°	1085.8	1082.9	1068.3	1049.4	1039.2
22.5°	1043.6	1043.6	1026.1	1001.3	991.1
25°	1004.2	998.4	982.4	947.4	921.1
27.5°	959.0	950.3	932.8	883.2	852.6
30°	909.5	905.1	880.3	816.2	792.9
32.5°	862.8	855.5	829.3	762.3	743.3
35°	814.7	808.9	769.6	711.3	693.8
37.5°	766.6	759.4	709.8	663.2	641.3
40°	718.5	709.8	655.9	613.6	590.3
42.5°	673.4	661.7	609.2	564.1	537.8
45°	625.3	612.1	559.7	513.0	492.6
47.5°	577.2	565.5	517.4	469.3	446.0
50°	526.2	516.0	472.2	424.1	399.4
52.5°	483.9	467.9	425.6	377.5	357.1
55°	434.3	421.2	381.9	336.7	319.2
57.5°	389.2	376.0	339.6	297.3	282.8
60°	346.9	327.9	297.3	260.9	249.2
62.5°	300.2	285.7	259.4	228.8	243.4
65°	258.0	243.4	220.1	224.5	186.6
67.5°	211.3	204.0	183.6	163.2	157.4
70°	172.0	163.2	156.0	134.1	128.3
72.5°	137.0	128.3	118.1	106.4	102.0
75°	103.5	96.2	90.4	86.0	94.7
77.5°	71.4	68.5	64.1	59.8	58.3
80°	46.6	45.2	43.7	42.3	40.8
82.5°	27.7	27.7	27.7	27.7	27.7
85°	14.6	16.0	17.5	18.9	20.4
87.5°	8.7	8.7	10.2	11.7	13.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)