

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: P561177

Luminaire Tested: FSR-12-4-LD4-1STD-35-UNV-82-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561177
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-12-4-LD4-1STD-35-UNV-82-88-EDD
Description: 1X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2608.0 lumens
Efficiency: N/A
Efficacy: 78.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

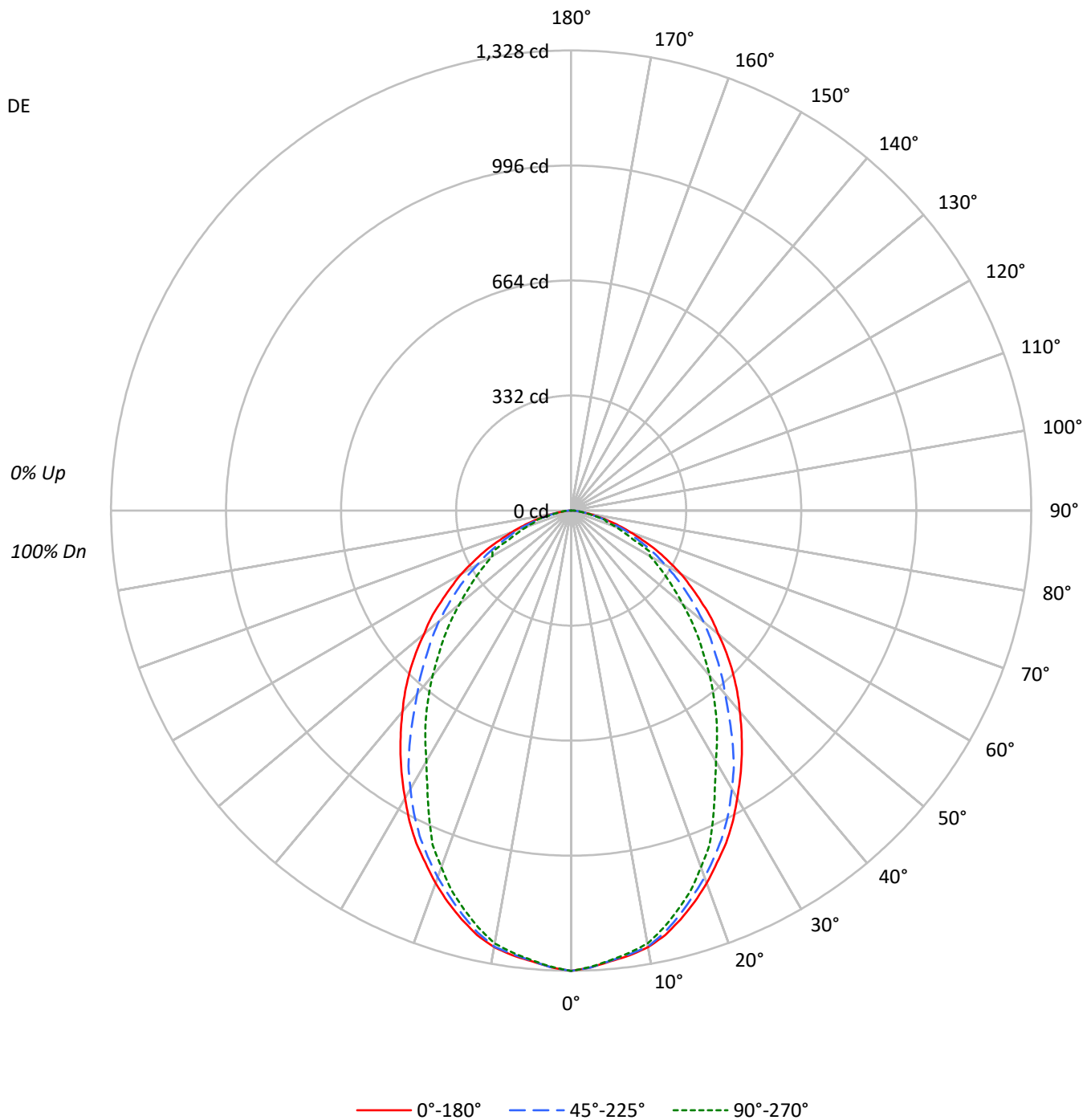
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P561177

CATALOG NUMBER: FSR-12-4-LD4-1STD-35-UNV-82-88-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P561177

CATALOG NUMBER: FSR-12-4-LD4-1STD-35-UNV-82-88-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	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					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°	3575	3575	3575
5°	3526	3522	3518
10°	3496	3492	3466
15°	3402	3367	3320
20°	3277	3224	3136
25°	3142	3073	2882
30°	2978	2882	2596
35°	2820	2664	2401
40°	2660	2428	2185
45°	2508	2245	1975
50°	2321	2083	1762
55°	2147	1888	1578
60°	1967	1686	1413
65°	1731	1477	1252
70°	1426	1293	1064
75°	1133	990	1038
80°	761	714	666
85°	475	568	664

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2508 cd/sqm

TEST NUMBER: P561177

CATALOG NUMBER: FSR-12-4-LD4-1STD-35-UNV-82-88-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.7	4.7
10°-20°	339.4	13.0
20°-30°	469.9	18.0
30°-40°	501.0	19.2
40°-50°	457.1	17.5
50°-60°	358.1	13.7
60°-70°	233.4	8.9
70°-80°	103.4	4.0
80°-90°	22.2	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
<hr/>		
0°-30°	932.9	35.8
0°-40°	1433.9	55.0
0°-60°	2249.0	86.2
0°-90°	2608.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2608.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1328	1328	1328	1328	1328	
5°	1305	1304	1304	1302	1302	124
15°	1221	1221	1209	1196	1192	343
25°	1058	1052	1035	998	971	486
35°	858	852	811	750	731	537
45°	659	645	590	541	519	508
55°	458	444	402	355	336	411
65°	272	256	232	236	197	268
75°	109	101	95	91	100	117
85°	15	17	18	20	22	21
90°	0	0	0	0	0	



TEST NUMBER: P561177

CATALOG NUMBER: FSR-12-4-LD4-1STD-35-UNV-82-88-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1328.5	1328.5	1328.5	1328.5	1328.5
2.5°	1319.3	1319.3	1319.3	1317.7	1317.7
5°	1305.4	1303.9	1303.9	1302.4	1302.4
7.5°	1294.7	1293.2	1291.6	1290.1	1287.0
10°	1279.3	1279.3	1277.8	1270.1	1268.6
12.5°	1254.8	1253.2	1247.1	1236.3	1233.3
15°	1221.0	1221.0	1208.7	1196.4	1191.8
17.5°	1184.1	1182.6	1167.2	1154.9	1148.8
20°	1144.2	1141.1	1125.8	1105.8	1095.0
22.5°	1099.6	1099.6	1081.2	1055.1	1044.4
25°	1058.2	1052.0	1035.1	998.3	970.6
27.5°	1010.6	1001.4	982.9	930.7	898.5
30°	958.3	953.7	927.6	860.1	835.5
32.5°	909.2	901.5	873.9	803.2	783.3
35°	858.5	852.4	810.9	749.5	731.0
37.5°	807.8	800.2	747.9	698.8	675.8
40°	757.2	747.9	691.1	646.6	622.0
42.5°	709.5	697.3	642.0	594.4	566.7
45°	658.9	645.0	589.8	540.6	519.1
47.5°	608.2	595.9	545.2	494.5	470.0
50°	554.4	543.7	497.6	446.9	420.8
52.5°	509.9	493.0	448.5	397.8	376.3
55°	457.7	443.9	402.4	354.8	336.3
57.5°	410.1	396.2	357.8	313.3	297.9
60°	365.5	345.6	313.3	274.9	262.6
62.5°	316.4	301.0	273.4	241.1	256.5
65°	271.8	256.5	231.9	236.5	196.6
67.5°	222.7	215.0	193.5	172.0	165.9
70°	181.2	172.0	164.3	141.3	135.2
72.5°	144.4	135.2	124.4	112.1	107.5
75°	109.0	101.4	95.2	90.6	99.8
77.5°	75.3	72.2	67.6	63.0	61.4
80°	49.1	47.6	46.1	44.5	43.0
82.5°	29.2	29.2	29.2	29.2	29.2
85°	15.4	16.9	18.4	20.0	21.5
87.5°	9.2	9.2	10.8	12.3	13.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)