

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: P561242

Luminaire Tested: FSR-12-4-LD4-1STD-40-UNV-82-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561242
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-40-UNV-82-94-EDD-90
Description: 1X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2627.0 lumens
Efficiency: N/A
Efficacy: 78.9 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

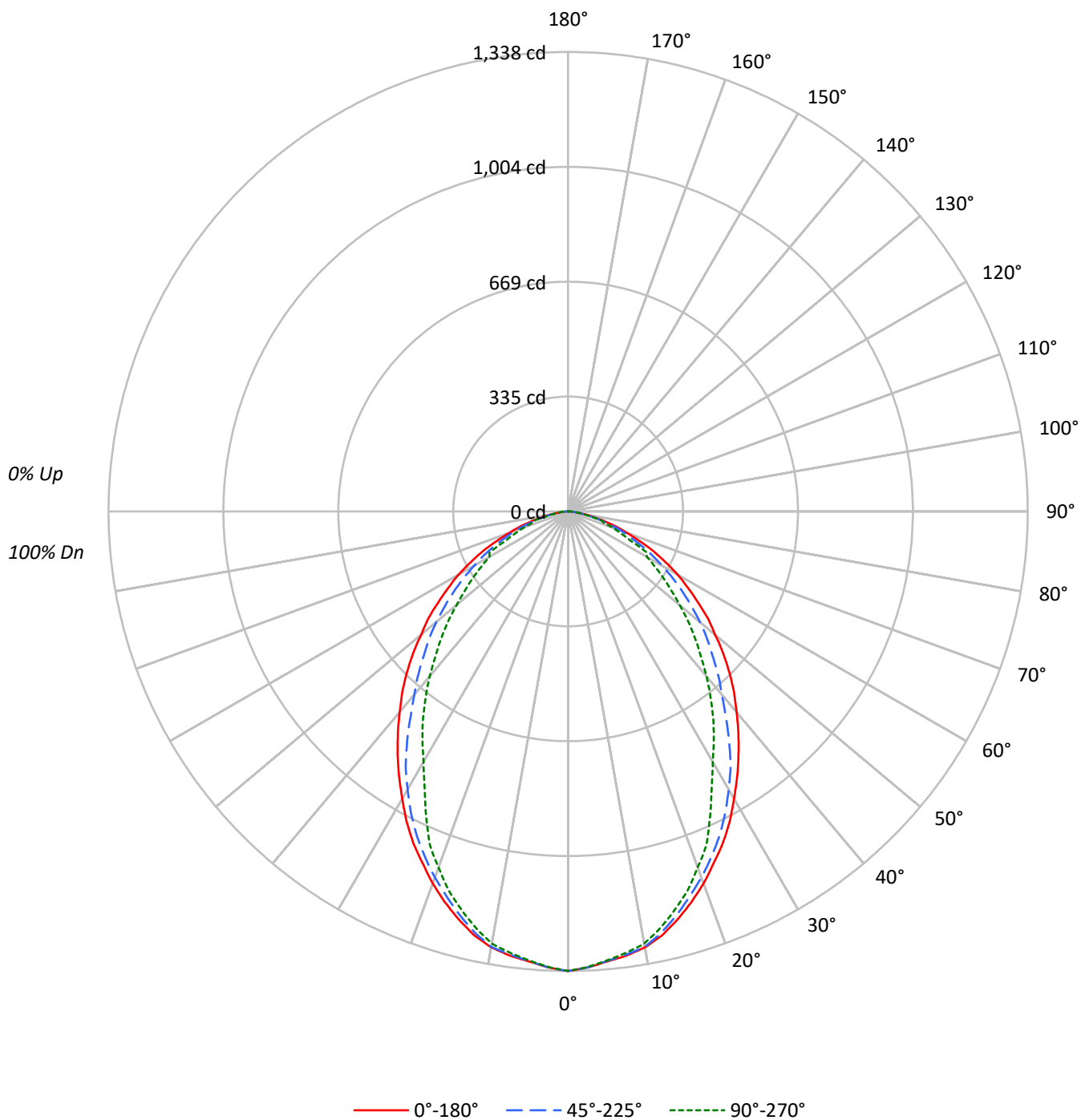
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					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	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°	3601	3601	3601
5°	3552	3548	3544
10°	3521	3517	3492
15°	3426	3392	3344
20°	3300	3247	3159
25°	3165	3096	2903
30°	2999	2903	2615
35°	2841	2683	2419
40°	2679	2446	2201
45°	2526	2261	1990
50°	2338	2098	1775
55°	2163	1901	1590
60°	1982	1699	1424
65°	1743	1487	1261
70°	1436	1302	1071
75°	1142	997	1046
80°	767	719	671
85°	479	574	670

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2526 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.6	4.7
10°-20°	341.9	13.0
20°-30°	473.3	18.0
30°-40°	504.7	19.2
40°-50°	460.4	17.5
50°-60°	360.7	13.7
60°-70°	235.1	8.9
70°-80°	104.1	4.0
80°-90°	22.4	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°	939.7	35.8
0°-40°	1444.4	55.0
0°-60°	2265.4	86.2
0°-90°	2627.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2627.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1338	1338	1338	1338	1338	
5°	1315	1313	1313	1312	1312	125
15°	1230	1230	1218	1205	1200	346
25°	1066	1060	1043	1006	978	489
35°	865	859	817	755	736	541
45°	664	650	594	544	523	511
55°	461	447	405	357	339	414
65°	274	258	234	238	198	270
75°	110	102	96	91	101	118
85°	16	17	19	20	22	21
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1338.2	1338.2	1338.2	1338.2	1338.2
2.5°	1328.9	1328.9	1328.9	1327.3	1327.3
5°	1315.0	1313.4	1313.4	1311.9	1311.9
7.5°	1304.1	1302.6	1301.0	1299.5	1296.4
10°	1288.7	1288.7	1287.1	1279.4	1277.8
12.5°	1263.9	1262.4	1256.2	1245.3	1242.2
15°	1229.9	1229.9	1217.5	1205.1	1200.5
17.5°	1192.7	1191.2	1175.7	1163.3	1157.2
20°	1152.5	1149.4	1134.0	1113.8	1103.0
22.5°	1107.7	1107.7	1089.1	1062.8	1052.0
25°	1065.9	1059.7	1042.7	1005.6	977.7
27.5°	1017.9	1008.6	990.1	937.5	905.0
30°	965.3	960.7	934.4	866.3	841.6
32.5°	915.8	908.1	880.2	809.1	789.0
35°	864.8	858.6	816.8	754.9	736.4
37.5°	813.7	806.0	753.4	703.9	680.7
40°	762.7	753.4	696.2	651.3	626.5
42.5°	714.7	702.3	646.6	598.7	570.8
45°	663.7	649.7	594.0	544.5	522.9
47.5°	612.6	600.2	549.2	498.1	473.4
50°	558.5	547.6	501.2	450.2	423.9
52.5°	513.6	496.6	451.7	400.7	379.0
55°	461.0	447.1	405.3	357.4	338.8
57.5°	413.1	399.1	360.5	315.6	300.1
60°	368.2	348.1	315.6	276.9	264.5
62.5°	318.7	303.2	275.4	242.9	258.3
65°	273.8	258.3	233.6	238.2	198.0
67.5°	224.3	216.6	194.9	173.3	167.1
70°	182.5	173.3	165.5	142.3	136.1
72.5°	145.4	136.1	125.3	112.9	108.3
75°	109.8	102.1	95.9	91.3	100.6
77.5°	75.8	72.7	68.1	63.4	61.9
80°	49.5	48.0	46.4	44.9	43.3
82.5°	29.4	29.4	29.4	29.4	29.4
85°	15.5	17.0	18.6	20.1	21.7
87.5°	9.3	9.3	10.8	12.4	13.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)