

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: P560681

Luminaire Tested: FSR-12-2-LD4-2STD-40-UNV-93-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560681
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-93-88-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2607.0 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: 2' x H: 0')
CIE Type: Direct

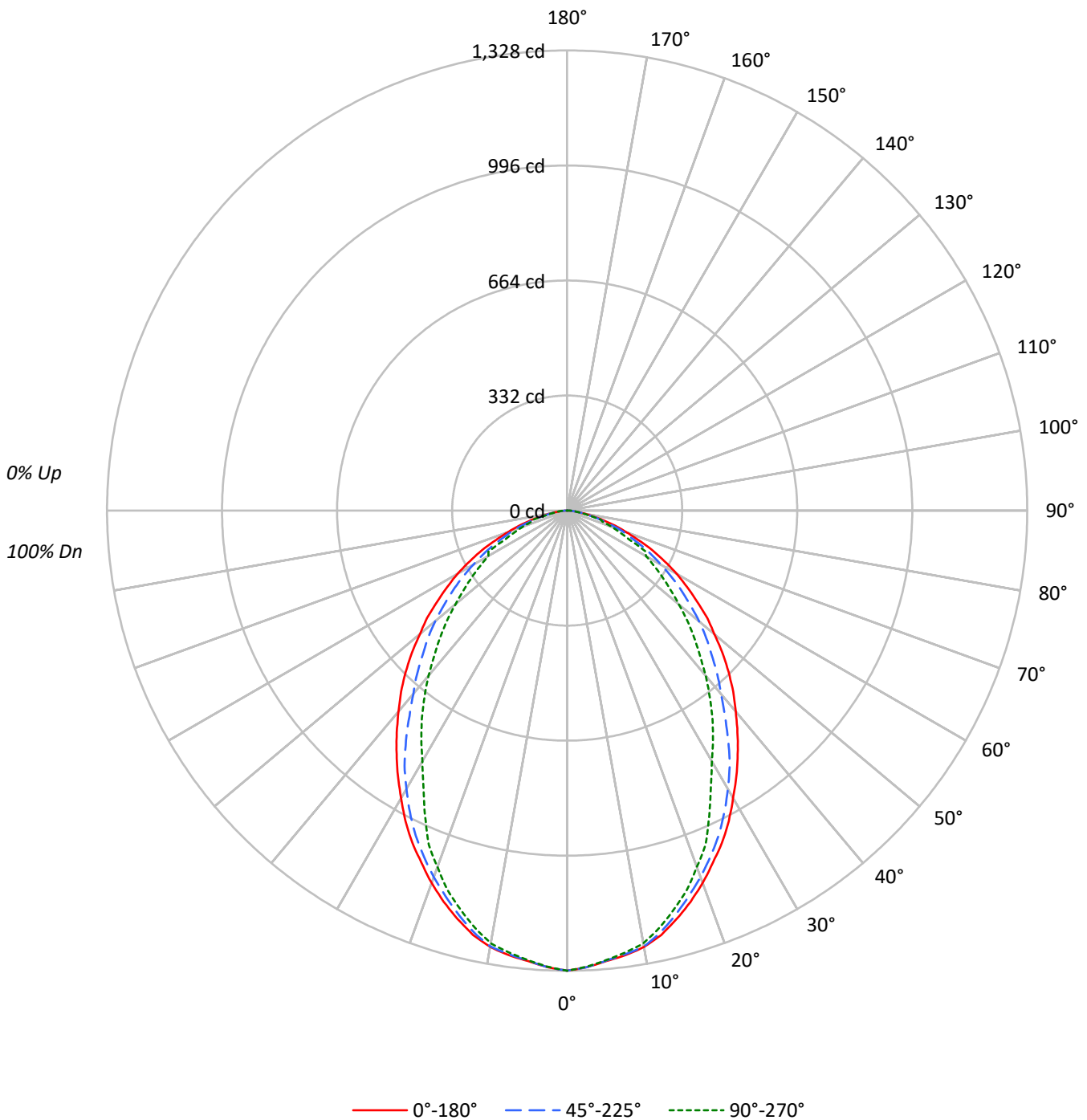
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7147	7147	7147
5°	7050	7042	7034
10°	6989	6980	6930
15°	6800	6732	6638
20°	6550	6445	6269
25°	6282	6144	5762
30°	5954	5763	5190
35°	5639	5326	4801
40°	5318	4854	4369
45°	5013	4487	3949
50°	4640	4165	3522
55°	4293	3774	3155
60°	3933	3371	2826
65°	3460	2952	2502
70°	2851	2585	2126
75°	2267	1980	2075
80°	1522	1429	1333
85°	951	1136	1328

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5013 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.6	4.7
10°-20°	339.3	13.0
20°-30°	469.7	18.0
30°-40°	500.8	19.2
40°-50°	456.9	17.5
50°-60°	357.9	13.7
60°-70°	233.3	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
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0°-30°	932.5	35.8
0°-40°	1433.4	55.0
0°-60°	2248.2	86.2
0°-90°	2607.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2607.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1328	1328	1328	1328	1328	
5°	1305	1303	1303	1302	1302	124
15°	1220	1220	1208	1196	1191	343
25°	1058	1052	1035	998	970	486
35°	858	852	811	749	731	537
45°	659	645	590	540	519	507
55°	458	444	402	355	336	410
65°	272	256	232	236	196	268
75°	109	101	95	91	100	117
85°	15	17	18	20	22	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1328.0	1328.0	1328.0	1328.0	1328.0
2.5°	1318.8	1318.8	1318.8	1317.2	1317.2
5°	1304.9	1303.4	1303.4	1301.9	1301.9
7.5°	1294.2	1292.7	1291.1	1289.6	1286.5
10°	1278.8	1278.8	1277.3	1269.6	1268.1
12.5°	1254.3	1252.7	1246.6	1235.9	1232.8
15°	1220.5	1220.5	1208.2	1195.9	1191.3
17.5°	1183.7	1182.1	1166.8	1154.5	1148.3
20°	1143.7	1140.7	1125.3	1105.4	1094.6
22.5°	1099.2	1099.2	1080.8	1054.7	1044.0
25°	1057.8	1051.6	1034.7	997.9	970.3
27.5°	1010.2	1001.0	982.5	930.3	898.1
30°	958.0	953.4	927.3	859.7	835.2
32.5°	908.9	901.2	873.5	802.9	783.0
35°	858.2	852.1	810.6	749.2	730.8
37.5°	807.5	799.9	747.7	698.5	675.5
40°	756.9	747.7	690.9	646.3	621.8
42.5°	709.3	697.0	641.7	594.1	566.5
45°	658.6	644.8	589.5	540.4	518.9
47.5°	607.9	595.7	545.0	494.3	469.8
50°	554.2	543.5	497.4	446.8	420.7
52.5°	509.7	492.8	448.3	397.6	376.1
55°	457.5	443.7	402.2	354.6	336.2
57.5°	409.9	396.1	357.7	313.2	297.8
60°	365.4	345.4	313.2	274.8	262.5
62.5°	316.3	300.9	273.3	241.0	256.4
65°	271.7	256.4	231.8	236.4	196.5
67.5°	222.6	214.9	193.4	171.9	165.8
70°	181.2	171.9	164.3	141.2	135.1
72.5°	144.3	135.1	124.4	112.1	107.5
75°	109.0	101.3	95.2	90.6	99.8
77.5°	75.2	72.2	67.5	62.9	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	10.7	12.3	13.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)