

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: P561133

Luminaire Tested: FSR-12-4-LD4-1LO-50-UNV-93-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561133
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-LD4-1LO-50-UNV-93-96-EDD
Description: 1X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2530.0 lumens
Efficiency: N/A
Efficacy: 108.1 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

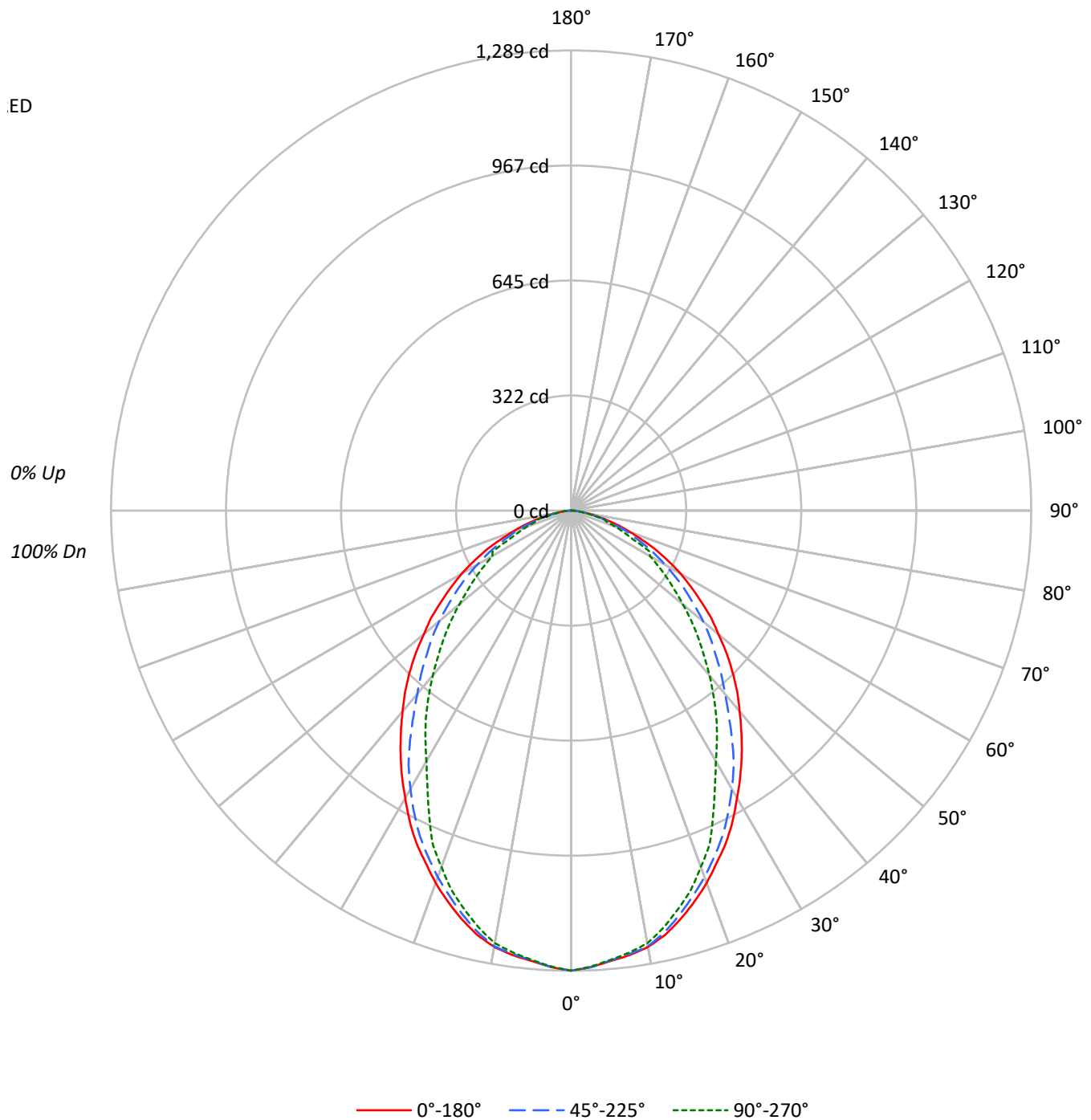
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	100	100	100	100	100		
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87	87	87	87		
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75	75	75	75		
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65	65	65	65		
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56	56	56	56		
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50	50	50	50		
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44	44	44	44		
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40	40	40	40		
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36	36	36	36		
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33	33	33	33		
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30	30	30	30		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3468	3468	3468
5°	3421	3417	3413
10°	3391	3387	3363
15°	3300	3266	3221
20°	3179	3127	3042
25°	3048	2982	2796
30°	2889	2796	2518
35°	2736	2584	2330
40°	2580	2355	2120
45°	2433	2177	1917
50°	2251	2021	1709
55°	2083	1831	1531
60°	1908	1636	1371
65°	1679	1433	1214
70°	1383	1254	1031
75°	1100	961	1006
80°	739	693	646
85°	460	553	645

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2433 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.0	4.7
10°-20°	329.2	13.0
20°-30°	455.8	18.0
30°-40°	486.0	19.2
40°-50°	443.4	17.5
50°-60°	347.4	13.7
60°-70°	226.4	8.9
70°-80°	100.3	4.0
80°-90°	21.5	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°	905.0	35.8
0°-40°	1391.0	55.0
0°-60°	2181.8	86.2
0°-90°	2530.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2530.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1289	1289	1289	1289	1289	
5°	1266	1265	1265	1263	1263	120
15°	1184	1184	1172	1161	1156	333
25°	1026	1021	1004	968	942	471
35°	833	827	787	727	709	521
45°	639	626	572	524	504	492
55°	444	431	390	344	326	398
65°	264	249	225	229	191	260
75°	106	98	92	88	97	113
85°	15	16	18	19	21	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1288.7	1288.7	1288.7	1288.7	1288.7
2.5°	1279.8	1279.8	1279.8	1278.3	1278.3
5°	1266.4	1264.9	1264.9	1263.4	1263.4
7.5°	1256.0	1254.5	1253.0	1251.5	1248.5
10°	1241.1	1241.1	1239.6	1232.1	1230.6
12.5°	1217.2	1215.7	1209.8	1199.4	1196.4
15°	1184.5	1184.5	1172.5	1160.6	1156.1
17.5°	1148.7	1147.2	1132.3	1120.4	1114.4
20°	1110.0	1107.0	1092.1	1072.7	1062.3
22.5°	1066.8	1066.8	1048.9	1023.5	1013.1
25°	1026.5	1020.6	1004.2	968.4	941.6
27.5°	980.3	971.4	953.5	902.9	871.6
30°	929.7	925.2	899.9	834.3	810.5
32.5°	882.0	874.6	847.7	779.2	759.8
35°	832.8	826.9	786.7	727.1	709.2
37.5°	783.7	776.2	725.6	677.9	655.5
40°	734.5	725.6	670.4	627.2	603.4
42.5°	688.3	676.4	622.8	576.6	549.8
45°	639.2	625.8	572.1	524.4	503.6
47.5°	590.0	578.1	528.9	479.7	455.9
50°	537.8	527.4	482.7	433.6	408.2
52.5°	494.6	478.3	435.0	385.9	365.0
55°	444.0	430.6	390.3	344.2	326.3
57.5°	397.8	384.4	347.1	303.9	289.0
60°	354.6	335.2	303.9	266.7	254.8
62.5°	306.9	292.0	265.2	233.9	248.8
65°	263.7	248.8	225.0	229.4	190.7
67.5°	216.0	208.6	187.7	166.9	160.9
70°	175.8	166.9	159.4	137.1	131.1
72.5°	140.0	131.1	120.7	108.8	104.3
75°	105.8	98.3	92.4	87.9	96.8
77.5°	73.0	70.0	65.6	61.1	59.6
80°	47.7	46.2	44.7	43.2	41.7
82.5°	28.3	28.3	28.3	28.3	28.3
85°	14.9	16.4	17.9	19.4	20.9
87.5°	8.9	8.9	10.4	11.9	13.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)