

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: P561065

Luminaire Tested: FSR-12-4-LD4-1LO-40-UNV-93-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561065
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-40-UNV-93-88-EDD
Description: 1X4 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: 2119.0 lumens
Efficiency: N/A
Efficacy: 90.6 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

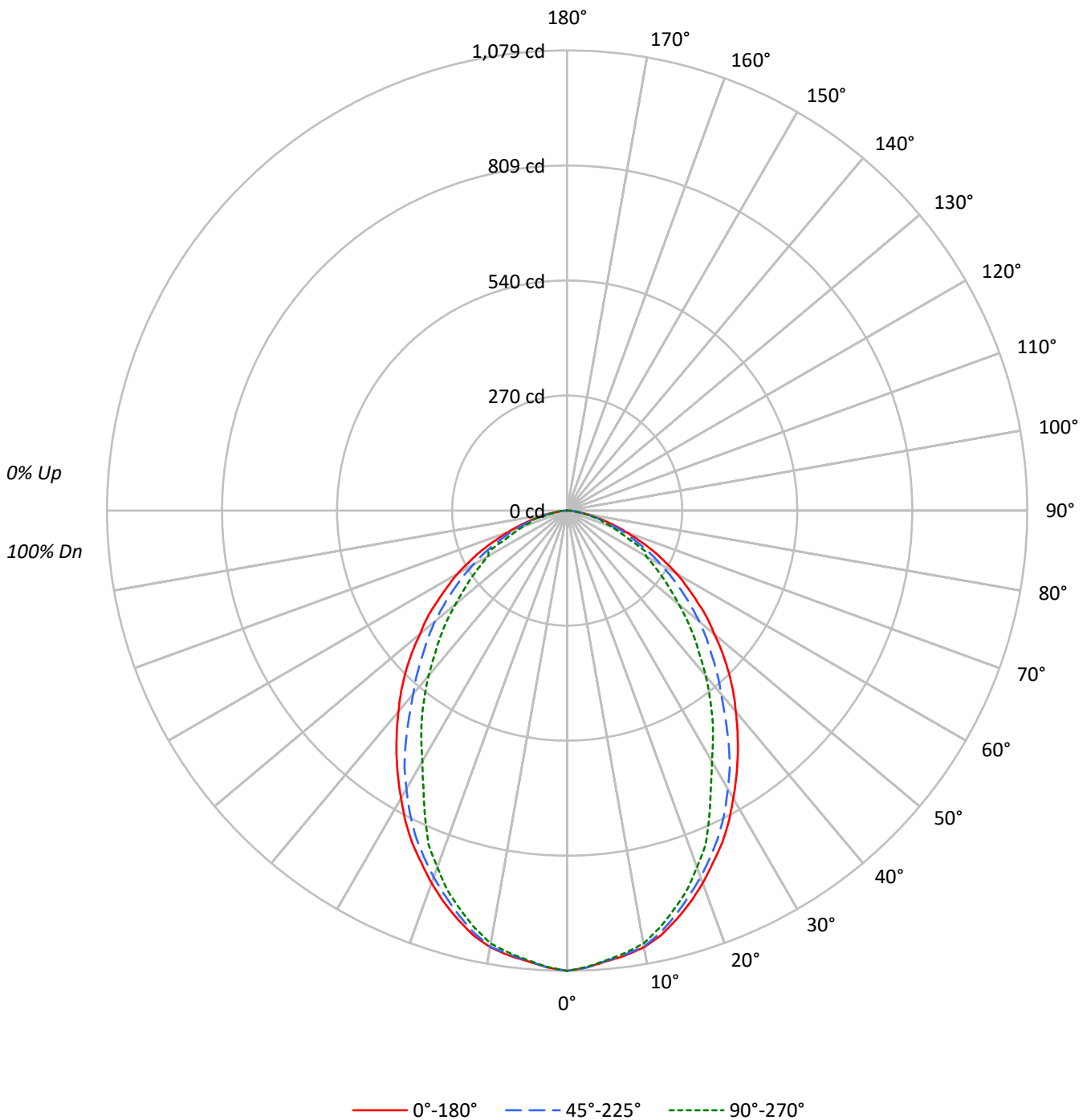
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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			
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°	2905	2905	2905
5°	2865	2862	2858
10°	2840	2837	2816
15°	2764	2736	2698
20°	2662	2619	2548
25°	2553	2497	2341
30°	2420	2342	2109
35°	2291	2165	1951
40°	2161	1972	1775
45°	2037	1824	1605
50°	1886	1693	1431
55°	1745	1534	1282
60°	1598	1370	1149
65°	1407	1200	1017
70°	1158	1050	864
75°	921	805	843
80°	618	580	541
85°	386	463	540

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2037 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.5	4.7
10°-20°	275.8	13.0
20°-30°	381.8	18.0
30°-40°	407.1	19.2
40°-50°	371.4	17.5
50°-60°	290.9	13.7
60°-70°	189.6	8.9
70°-80°	84.0	4.0
80°-90°	18.0	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°	758.0	35.8
0°-40°	1165.1	55.0
0°-60°	1827.3	86.2
0°-90°	2119.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2119.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1079	1079	1079	1079	1079	
5°	1061	1059	1059	1058	1058	101
15°	992	992	982	972	968	279
25°	860	855	841	811	789	395
35°	698	693	659	609	594	436
45°	535	524	479	439	422	412
55°	372	361	327	288	273	334
65°	221	208	188	192	160	218
75°	89	82	77	74	81	95
85°	12	14	15	16	18	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1079.4	1079.4	1079.4	1079.4	1079.4
2.5°	1071.9	1071.9	1071.9	1070.7	1070.7
5°	1060.7	1059.4	1059.4	1058.2	1058.2
7.5°	1051.9	1050.7	1049.4	1048.2	1045.7
10°	1039.5	1039.5	1038.2	1032.0	1030.7
12.5°	1019.5	1018.2	1013.3	1004.5	1002.0
15°	992.0	992.0	982.1	972.1	968.3
17.5°	962.1	960.8	948.4	938.4	933.4
20°	929.6	927.2	914.7	898.5	889.7
22.5°	893.5	893.5	878.5	857.3	848.5
25°	859.8	854.8	841.1	811.1	788.6
27.5°	821.1	813.6	798.6	756.2	730.0
30°	778.7	774.9	753.7	698.8	678.8
32.5°	738.7	732.5	710.0	652.6	636.4
35°	697.5	692.6	658.9	609.0	594.0
37.5°	656.4	650.1	607.7	567.8	549.1
40°	615.2	607.7	561.5	525.3	505.4
42.5°	576.5	566.5	521.6	482.9	460.5
45°	535.3	524.1	479.2	439.2	421.8
47.5°	494.1	484.2	443.0	401.8	381.8
50°	450.5	441.7	404.3	363.1	341.9
52.5°	414.3	400.6	364.4	323.2	305.7
55°	371.9	360.6	326.9	288.3	273.3
57.5°	333.2	321.9	290.7	254.6	242.1
60°	297.0	280.8	254.6	223.4	213.4
62.5°	257.1	244.6	222.1	195.9	208.4
65°	220.9	208.4	188.4	192.2	159.7
67.5°	180.9	174.7	157.2	139.8	134.8
70°	147.2	139.8	133.5	114.8	109.8
72.5°	117.3	109.8	101.1	91.1	87.3
75°	88.6	82.4	77.4	73.6	81.1
77.5°	61.1	58.6	54.9	51.2	49.9
80°	39.9	38.7	37.4	36.2	34.9
82.5°	23.7	23.7	23.7	23.7	23.7
85°	12.5	13.7	15.0	16.2	17.5
87.5°	7.5	7.5	8.7	10.0	11.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)