

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: P560987

Luminaire Tested: FSR-12-4-LD4-1LO-35-UNV-82-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560987
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-35-UNV-82-94-EDD
Description: 1X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2312.0 lumens
Efficiency: N/A
Efficacy: 98.8 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

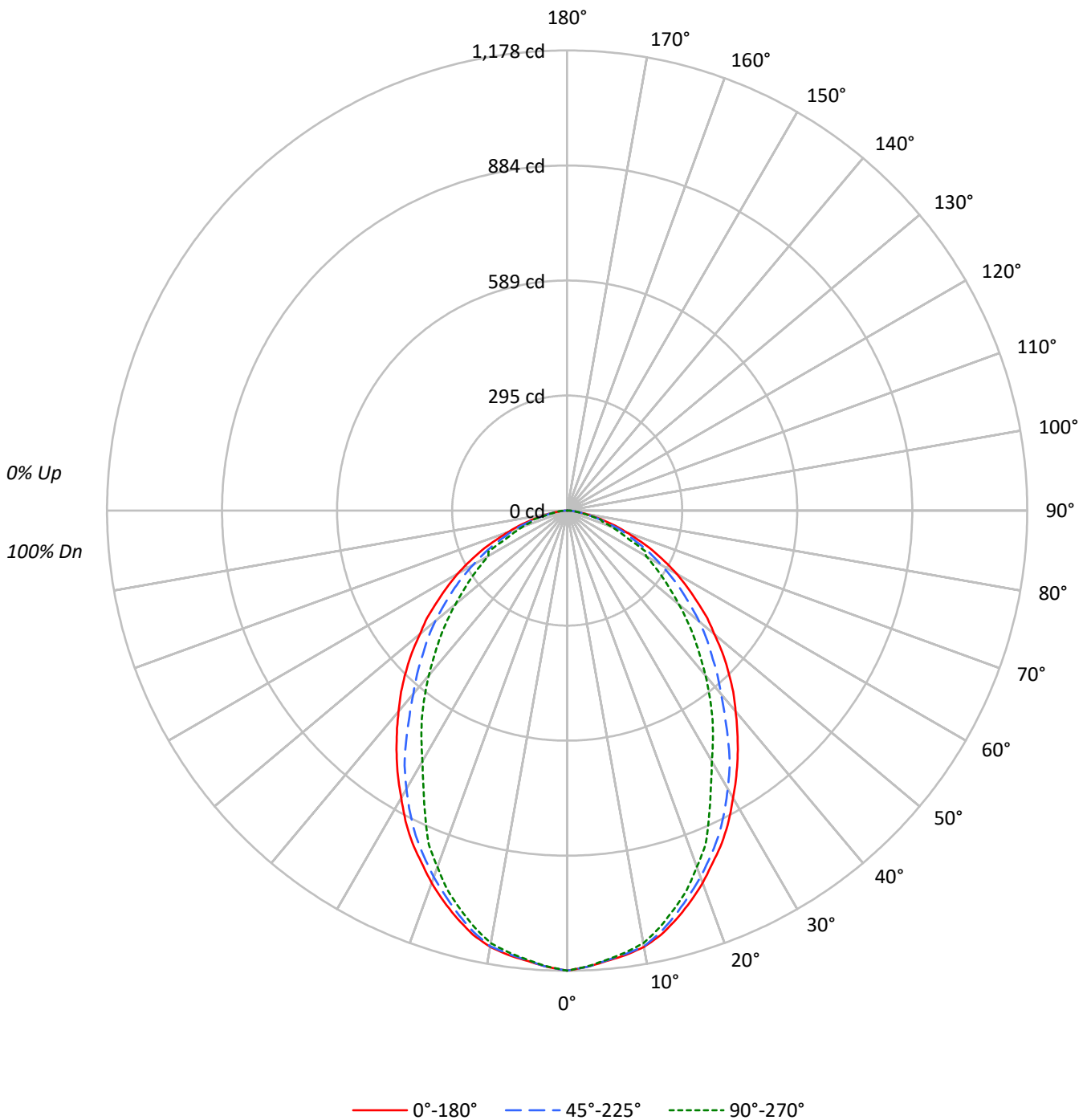
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3169	3169	3169
5°	3126	3122	3119
10°	3099	3095	3073
15°	3015	2985	2943
20°	2905	2858	2780
25°	2785	2725	2555
30°	2640	2555	2302
35°	2500	2362	2129
40°	2358	2152	1937
45°	2223	1990	1751
50°	2058	1847	1562
55°	1903	1673	1399
60°	1744	1495	1253
65°	1535	1309	1110
70°	1264	1146	943
75°	1005	878	920
80°	676	632	590
85°	420	503	590

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2223 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.6	4.7
10°-20°	300.9	13.0
20°-30°	416.5	18.0
30°-40°	444.1	19.2
40°-50°	405.2	17.5
50°-60°	317.4	13.7
60°-70°	206.9	8.9
70°-80°	91.7	4.0
80°-90°	19.7	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°	827.0	35.8
0°-40°	1271.2	55.0
0°-60°	1993.8	86.2
0°-90°	2312.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2312.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1178	1178	1178	1178	1178	
5°	1157	1156	1156	1155	1155	110
15°	1082	1082	1072	1061	1056	304
25°	938	933	918	885	860	431
35°	761	756	719	664	648	476
45°	584	572	523	479	460	450
55°	406	394	357	314	298	364
65°	241	227	206	210	174	237
75°	97	90	84	80	88	104
85°	14	15	16	18	19	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1177.7	1177.7	1177.7	1177.7	1177.7
2.5°	1169.5	1169.5	1169.5	1168.2	1168.2
5°	1157.3	1155.9	1155.9	1154.6	1154.6
7.5°	1147.7	1146.4	1145.0	1143.7	1140.9
10°	1134.1	1134.1	1132.8	1126.0	1124.6
12.5°	1112.3	1111.0	1105.5	1096.0	1093.3
15°	1082.4	1082.4	1071.5	1060.6	1056.5
17.5°	1049.7	1048.4	1034.7	1023.9	1018.4
20°	1014.3	1011.6	998.0	980.3	970.8
22.5°	974.8	974.8	958.5	935.4	925.8
25°	938.1	932.6	917.7	885.0	860.5
27.5°	895.9	887.7	871.4	825.1	796.5
30°	849.6	845.5	822.3	762.4	740.7
32.5°	806.0	799.2	774.7	712.1	694.4
35°	761.1	755.6	718.9	664.4	648.1
37.5°	716.2	709.3	663.1	619.5	599.1
40°	671.2	663.1	612.7	573.2	551.4
42.5°	629.0	618.1	569.1	526.9	502.4
45°	584.1	571.8	522.8	479.2	460.2
47.5°	539.2	528.3	483.3	438.4	416.6
50°	491.5	482.0	441.1	396.2	373.1
52.5°	452.0	437.0	397.6	352.6	333.6
55°	405.7	393.5	356.7	314.5	298.2
57.5°	363.5	351.3	317.2	277.7	264.1
60°	324.0	306.3	277.7	243.7	232.8
62.5°	280.5	266.9	242.3	213.8	227.4
65°	241.0	227.4	205.6	209.7	174.3
67.5°	197.4	190.6	171.5	152.5	147.0
70°	160.7	152.5	145.7	125.3	119.8
72.5°	128.0	119.8	110.3	99.4	95.3
75°	96.7	89.9	84.4	80.3	88.5
77.5°	66.7	64.0	59.9	55.8	54.5
80°	43.6	42.2	40.8	39.5	38.1
82.5°	25.9	25.9	25.9	25.9	25.9
85°	13.6	15.0	16.3	17.7	19.1
87.5°	8.2	8.2	9.5	10.9	12.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)