

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: P560951

Luminaire Tested: FSR-12-4-LD4-1LO-35-UNV-80-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560951
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-80-87-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2326.0 lumens
Efficiency: N/A
Efficacy: 99.4 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

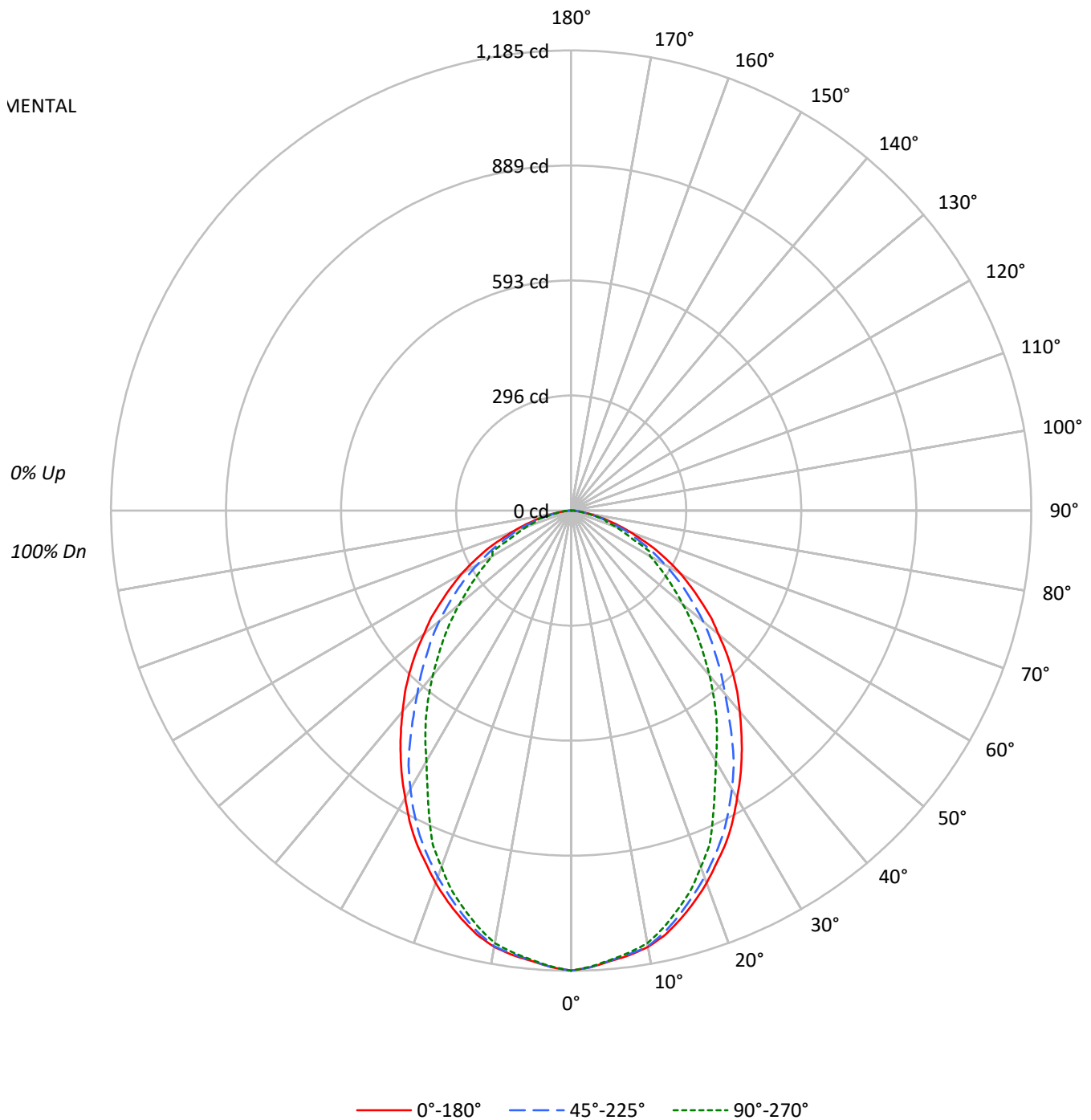
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3188	3188	3188
5°	3145	3141	3138
10°	3118	3114	3092
15°	3034	3003	2961
20°	2922	2875	2797
25°	2802	2741	2570
30°	2656	2571	2315
35°	2515	2376	2142
40°	2372	2165	1949
45°	2236	2002	1762
50°	2070	1858	1571
55°	1915	1684	1407
60°	1755	1504	1260
65°	1543	1317	1116
70°	1271	1153	948
75°	1012	883	925
80°	679	637	595
85°	423	506	593

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2236 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.3	4.7
10°-20°	302.7	13.0
20°-30°	419.0	18.0
30°-40°	446.8	19.2
40°-50°	407.7	17.5
50°-60°	319.4	13.7
60°-70°	208.1	8.9
70°-80°	92.2	4.0
80°-90°	19.8	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°	832.0	35.8
0°-40°	1278.9	55.0
0°-60°	2005.9	86.2
0°-90°	2326.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2326.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1185	1185	1185	1185	1185	
5°	1164	1163	1163	1162	1162	111
15°	1089	1089	1078	1067	1063	306
25°	944	938	923	890	866	433
35°	766	760	723	668	652	479
45°	588	575	526	482	463	453
55°	408	396	359	316	300	366
65°	242	229	207	211	175	239
75°	97	90	85	81	89	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°	1184.8	1184.8	1184.8	1184.8	1184.8
2.5°	1176.6	1176.6	1176.6	1175.2	1175.2
5°	1164.3	1162.9	1162.9	1161.5	1161.5
7.5°	1154.7	1153.3	1152.0	1150.6	1147.9
10°	1141.0	1141.0	1139.6	1132.8	1131.4
12.5°	1119.1	1117.7	1112.2	1102.6	1099.9
15°	1089.0	1089.0	1078.0	1067.0	1062.9
17.5°	1056.1	1054.7	1041.0	1030.1	1024.6
20°	1020.5	1017.7	1004.0	986.2	976.6
22.5°	980.7	980.7	964.3	941.0	931.4
25°	943.8	938.3	923.2	890.3	865.7
27.5°	901.3	893.1	876.6	830.1	801.3
30°	854.7	850.6	827.3	767.1	745.1
32.5°	810.9	804.0	779.4	716.4	698.6
35°	765.7	760.2	723.2	668.4	652.0
37.5°	720.5	713.6	667.1	623.2	602.7
40°	675.3	667.1	616.4	576.7	554.7
42.5°	632.8	621.9	572.6	530.1	505.4
45°	587.6	575.3	526.0	482.2	463.0
47.5°	542.4	531.5	486.3	441.1	419.1
50°	494.5	484.9	443.8	398.6	375.3
52.5°	454.8	439.7	400.0	354.8	335.6
55°	408.2	395.9	358.9	316.4	300.0
57.5°	365.7	353.4	319.2	279.4	265.7
60°	326.0	308.2	279.4	245.2	234.2
62.5°	282.2	268.5	243.8	215.1	228.7
65°	242.4	228.7	206.8	210.9	175.3
67.5°	198.6	191.8	172.6	153.4	147.9
70°	161.6	153.4	146.6	126.0	120.5
72.5°	128.8	120.5	110.9	100.0	95.9
75°	97.3	90.4	84.9	80.8	89.0
77.5°	67.1	64.4	60.3	56.2	54.8
80°	43.8	42.5	41.1	39.7	38.4
82.5°	26.0	26.0	26.0	26.0	26.0
85°	13.7	15.1	16.4	17.8	19.2
87.5°	8.2	8.2	9.6	11.0	12.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)