

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: P561264

Luminaire Tested: FSR-12-4-LD4-1STD-50-UNV-80-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561264
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-LD4-1STD-50-UNV-80-84-EDD-90
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2968.0 lumens
Efficiency: N/A
Efficacy: 89.1 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

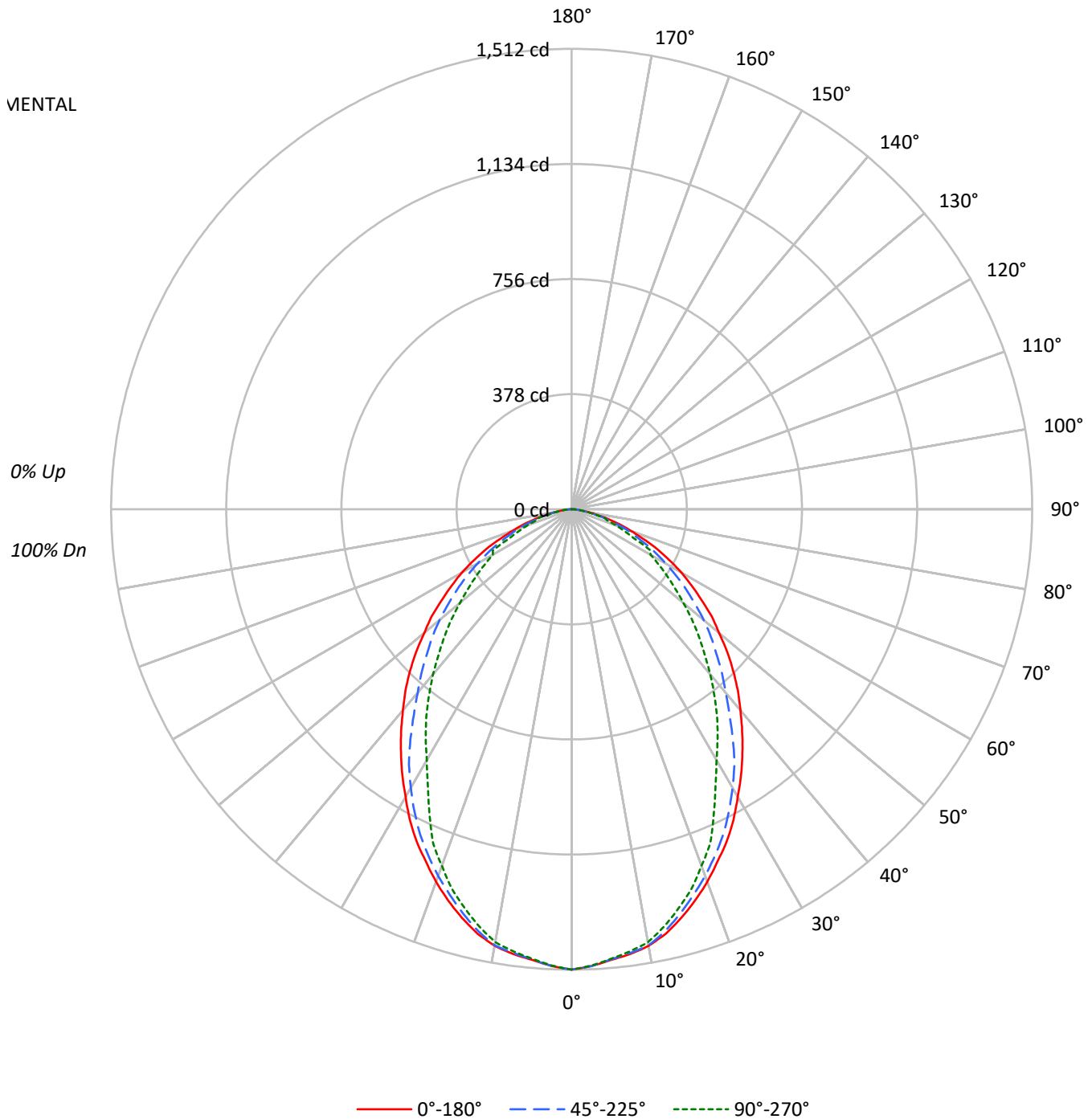
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4068	4068	4068
5°	4013	4008	4004
10°	3978	3974	3945
15°	3871	3832	3779
20°	3729	3669	3569
25°	3575	3498	3280
30°	3389	3280	2954
35°	3210	3031	2733
40°	3027	2763	2487
45°	2853	2554	2248
50°	2642	2371	2005
55°	2443	2148	1796
60°	2239	1919	1609
65°	1970	1680	1424
70°	1622	1471	1210
75°	1290	1127	1181
80°	866	812	758
85°	540	648	756

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2853 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.7	4.7
10°-20°	386.2	13.0
20°-30°	534.7	18.0
30°-40°	570.2	19.2
40°-50°	520.2	17.5
50°-60°	407.5	13.7
60°-70°	265.6	8.9
70°-80°	117.7	4.0
80°-90°	25.3	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°	1061.7	35.8
0°-40°	1631.8	55.0
0°-60°	2559.5	86.2
0°-90°	2968.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2968.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1512	1512	1512	1512	1512	
5°	1486	1484	1484	1482	1482	141
15°	1390	1390	1376	1362	1356	391
25°	1204	1197	1178	1136	1105	553
35°	977	970	923	853	832	611
45°	750	734	671	615	591	578
55°	521	505	458	404	383	467
65°	309	292	264	269	224	305
75°	124	115	108	103	114	133
85°	18	19	21	23	24	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1511.9	1511.9	1511.9	1511.9	1511.9
2.5°	1501.4	1501.4	1501.4	1499.6	1499.6
5°	1485.6	1483.9	1483.9	1482.1	1482.1
7.5°	1473.4	1471.7	1469.9	1468.2	1464.7
10°	1455.9	1455.9	1454.2	1445.4	1443.7
12.5°	1428.0	1426.2	1419.2	1407.0	1403.5
15°	1389.5	1389.5	1375.5	1361.5	1356.3
17.5°	1347.6	1345.8	1328.3	1314.4	1307.4
20°	1302.1	1298.6	1281.1	1258.4	1246.2
22.5°	1251.4	1251.4	1230.5	1200.7	1188.5
25°	1204.2	1197.3	1178.0	1136.1	1104.6
27.5°	1150.1	1139.6	1118.6	1059.2	1022.5
30°	1090.6	1085.4	1055.7	978.8	950.8
32.5°	1034.7	1026.0	994.5	914.1	891.4
35°	977.0	970.0	922.8	852.9	832.0
37.5°	919.4	910.6	851.2	795.3	769.0
40°	861.7	851.2	786.5	735.8	707.9
42.5°	807.5	793.5	730.6	676.4	644.9
45°	749.8	734.1	671.2	615.2	590.8
47.5°	692.1	678.2	620.5	562.8	534.8
50°	631.0	618.7	566.3	508.6	478.9
52.5°	580.3	561.0	510.4	452.7	428.2
55°	520.8	505.1	457.9	403.7	382.8
57.5°	466.7	450.9	407.2	356.6	339.1
60°	416.0	393.3	356.6	312.9	298.9
62.5°	360.0	342.6	311.1	274.4	291.9
65°	309.4	291.9	263.9	269.2	223.7
67.5°	253.4	244.7	220.2	195.8	188.8
70°	206.2	195.8	187.0	160.8	153.8
72.5°	164.3	153.8	141.6	127.6	122.3
75°	124.1	115.4	108.4	103.1	113.6
77.5°	85.6	82.1	76.9	71.7	69.9
80°	55.9	54.2	52.4	50.7	48.9
82.5°	33.2	33.2	33.2	33.2	33.2
85°	17.5	19.2	21.0	22.7	24.5
87.5°	10.5	10.5	12.2	14.0	15.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)