

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: P561145

Luminaire Tested: FSR-12-4-LD4-1STD-35-UNV-80-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561145
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-35-UNV-80-88-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2804.0 lumens
Efficiency: N/A
Efficacy: 84.2 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

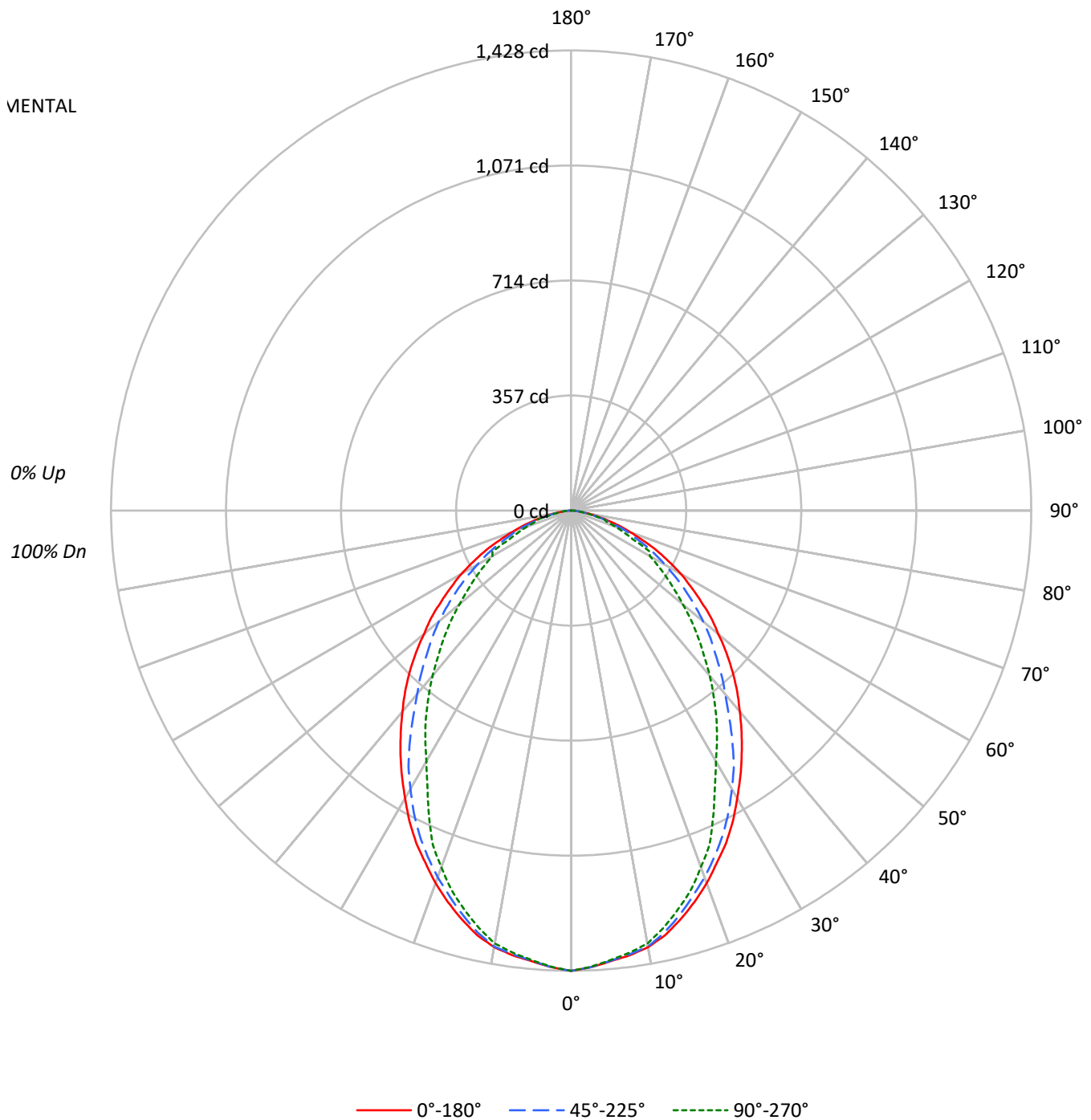
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3844	3844	3844
5°	3791	3787	3782
10°	3759	3754	3727
15°	3657	3620	3570
20°	3523	3466	3371
25°	3378	3304	3099
30°	3202	3099	2791
35°	3032	2864	2582
40°	2860	2610	2349
45°	2696	2413	2124
50°	2496	2240	1894
55°	2309	2030	1696
60°	2115	1813	1520
65°	1861	1587	1346
70°	1533	1390	1143
75°	1219	1065	1116
80°	818	767	716
85°	509	611	713

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2696 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.0	4.7
10°-20°	364.9	13.0
20°-30°	505.2	18.0
30°-40°	538.7	19.2
40°-50°	491.4	17.5
50°-60°	385.0	13.7
60°-70°	250.9	8.9
70°-80°	111.2	4.0
80°-90°	23.9	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°	1003.0	35.8
0°-40°	1541.7	55.0
0°-60°	2418.1	86.2
0°-90°	2804.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2804.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1428	1428	1428	1428	1428	
5°	1404	1402	1402	1400	1400	133
15°	1313	1313	1300	1286	1281	369
25°	1138	1131	1113	1073	1044	522
35°	923	916	872	806	786	577
45°	708	694	634	581	558	546
55°	492	477	433	381	362	441
65°	292	276	249	254	211	288
75°	117	109	102	97	107	126
85°	16	18	20	22	23	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1428.3	1428.3	1428.3	1428.3	1428.3
2.5°	1418.4	1418.4	1418.4	1416.8	1416.8
5°	1403.6	1401.9	1401.9	1400.2	1400.2
7.5°	1392.0	1390.3	1388.7	1387.0	1383.7
10°	1375.5	1375.5	1373.8	1365.6	1363.9
12.5°	1349.1	1347.4	1340.8	1329.2	1325.9
15°	1312.7	1312.7	1299.5	1286.3	1281.4
17.5°	1273.1	1271.5	1254.9	1241.7	1235.1
20°	1230.2	1226.9	1210.4	1188.9	1177.3
22.5°	1182.3	1182.3	1162.5	1134.4	1122.8
25°	1137.7	1131.1	1112.9	1073.3	1043.6
27.5°	1086.5	1076.6	1056.8	1000.6	966.0
30°	1030.4	1025.4	997.3	924.7	898.3
32.5°	977.5	969.3	939.6	863.6	842.1
35°	923.0	916.4	871.9	805.8	786.0
37.5°	868.6	860.3	804.2	751.3	726.5
40°	814.1	804.2	743.1	695.2	668.8
42.5°	762.9	749.7	690.2	639.0	609.3
45°	708.4	693.5	634.1	581.2	558.1
47.5°	653.9	640.7	586.2	531.7	505.3
50°	596.1	584.5	535.0	480.5	452.4
52.5°	548.2	530.0	482.2	427.7	404.6
55°	492.1	477.2	432.6	381.4	361.6
57.5°	440.9	426.0	384.7	336.9	320.3
60°	393.0	371.5	336.9	295.6	282.4
62.5°	340.2	323.6	293.9	259.2	275.8
65°	292.3	275.8	249.3	254.3	211.4
67.5°	239.4	231.2	208.1	184.9	178.3
70°	194.8	184.9	176.7	151.9	145.3
72.5°	155.2	145.3	133.8	120.5	115.6
75°	117.2	109.0	102.4	97.4	107.3
77.5°	80.9	77.6	72.7	67.7	66.0
80°	52.8	51.2	49.5	47.9	46.2
82.5°	31.4	31.4	31.4	31.4	31.4
85°	16.5	18.2	19.8	21.5	23.1
87.5°	9.9	9.9	11.6	13.2	14.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)