

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: P590330

Luminaire Tested: FSR-24-2-LD4-2STD-35-UNV-80-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590330
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-2STD-35-UNV-80-94-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3911.0 lumens
Efficiency: N/A
Efficacy: 117.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

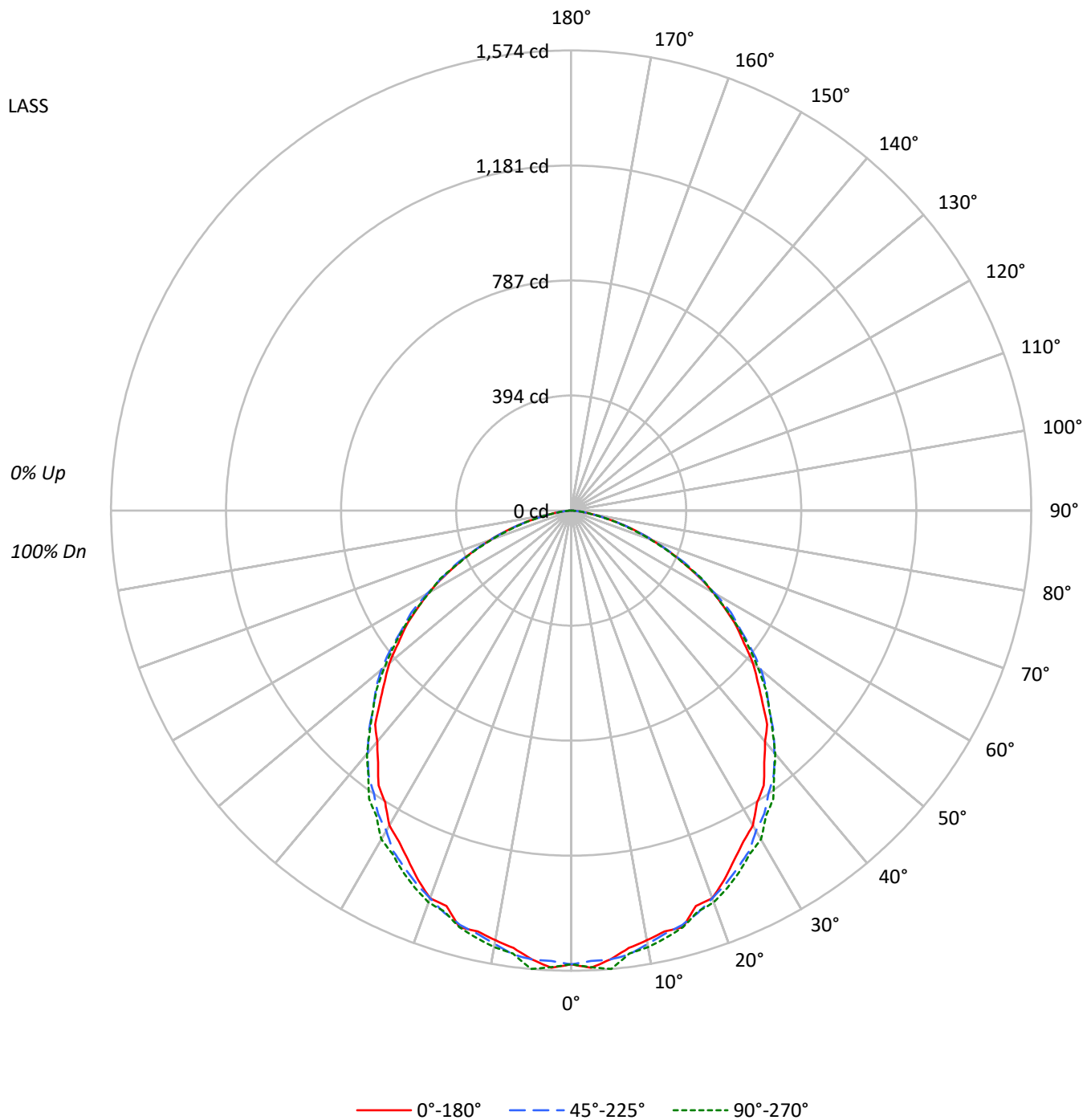
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4176	4176	4176
5°	4162	4164	4251
10°	4078	4113	4142
15°	4110	4087	4110
20°	4040	4040	4084
25°	3916	4002	4046
30°	3862	3930	4035
35°	3772	3870	3957
40°	3625	3799	3816
45°	3515	3640	3645
50°	3400	3553	3485
55°	3239	3302	3279
60°	3029	3059	3004
65°	2701	2770	2682
70°	2317	2325	2260
75°	1835	1831	1760
80°	1229	1195	1148
85°	667	661	618

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3734 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.0	3.7
10°-20°	413.7	10.6
20°-30°	619.8	15.8
30°-40°	734.6	18.8
40°-50°	736.0	18.8
50°-60°	624.7	16.0
60°-70°	421.2	10.8
70°-80°	185.0	4.7
80°-90°	30.1	0.8
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°	1179.5	30.2
0°-40°	1914.1	48.9
0°-60°	3274.7	83.7
0°-90°	3911.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3911.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1552	1552	1552	1552	1552	
5°	1541	1537	1541	1537	1574	145
15°	1475	1458	1467	1475	1475	411
25°	1319	1326	1348	1366	1363	610
35°	1148	1152	1178	1205	1205	713
45°	924	941	956	981	958	715
55°	690	686	704	699	699	614
65°	424	419	435	418	421	422
75°	176	173	176	164	169	189
85°	22	21	21	21	20	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1551.8	1551.8	1551.8	1551.8	1551.8
2.5°	1565.2	1553.4	1542.4	1555.2	1563.0
5°	1540.8	1537.2	1541.4	1536.8	1573.8
7.5°	1509.1	1522.9	1530.9	1525.9	1528.1
10°	1492.3	1487.5	1505.3	1517.7	1515.9
12.5°	1474.2	1481.5	1482.5	1495.9	1497.1
15°	1475.2	1458.2	1467.2	1474.8	1475.4
17.5°	1417.9	1436.4	1442.6	1460.0	1438.4
20°	1410.9	1397.5	1410.9	1428.8	1426.0
22.5°	1367.9	1352.8	1381.7	1397.5	1396.5
25°	1319.0	1326.2	1347.8	1365.5	1362.6
27.5°	1276.1	1284.5	1315.4	1339.6	1324.0
30°	1243.0	1238.8	1264.9	1286.5	1298.5
32.5°	1183.9	1199.2	1229.6	1251.0	1239.6
35°	1148.1	1151.5	1178.1	1205.4	1204.6
37.5°	1085.3	1101.2	1138.6	1146.3	1139.2
40°	1031.9	1047.7	1081.5	1089.8	1086.4
42.5°	992.4	995.2	1024.2	1033.7	1018.6
45°	923.7	940.9	956.5	981.2	957.9
47.5°	865.2	873.2	906.8	913.4	901.2
50°	812.1	814.9	848.7	840.5	832.5
52.5°	745.3	757.2	776.2	774.6	765.2
55°	690.4	685.8	703.9	699.1	698.9
57.5°	624.5	632.5	647.4	639.7	627.5
60°	562.8	563.0	568.4	559.8	558.2
62.5°	494.1	496.5	497.7	487.1	504.3
65°	424.2	418.6	435.0	418.4	421.2
67.5°	359.8	362.7	361.0	350.6	354.6
70°	294.5	298.1	295.5	283.7	287.3
72.5°	234.8	230.4	233.2	218.4	225.2
75°	176.5	172.9	176.1	163.7	169.3
77.5°	120.2	123.0	121.0	114.4	118.2
80°	79.3	77.1	77.1	73.3	74.1
82.5°	46.3	44.1	43.5	42.3	44.1
85°	21.6	21.0	21.4	20.8	20.0
87.5°	7.8	8.0	8.0	7.6	7.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)