

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: P590332

Luminaire Tested: FSR-24-2-LD4-2STD-35-UNV-80-97-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590332
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-80-97-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 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: 3729.0 lumens
Efficiency: N/A
Efficacy: 112.0 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

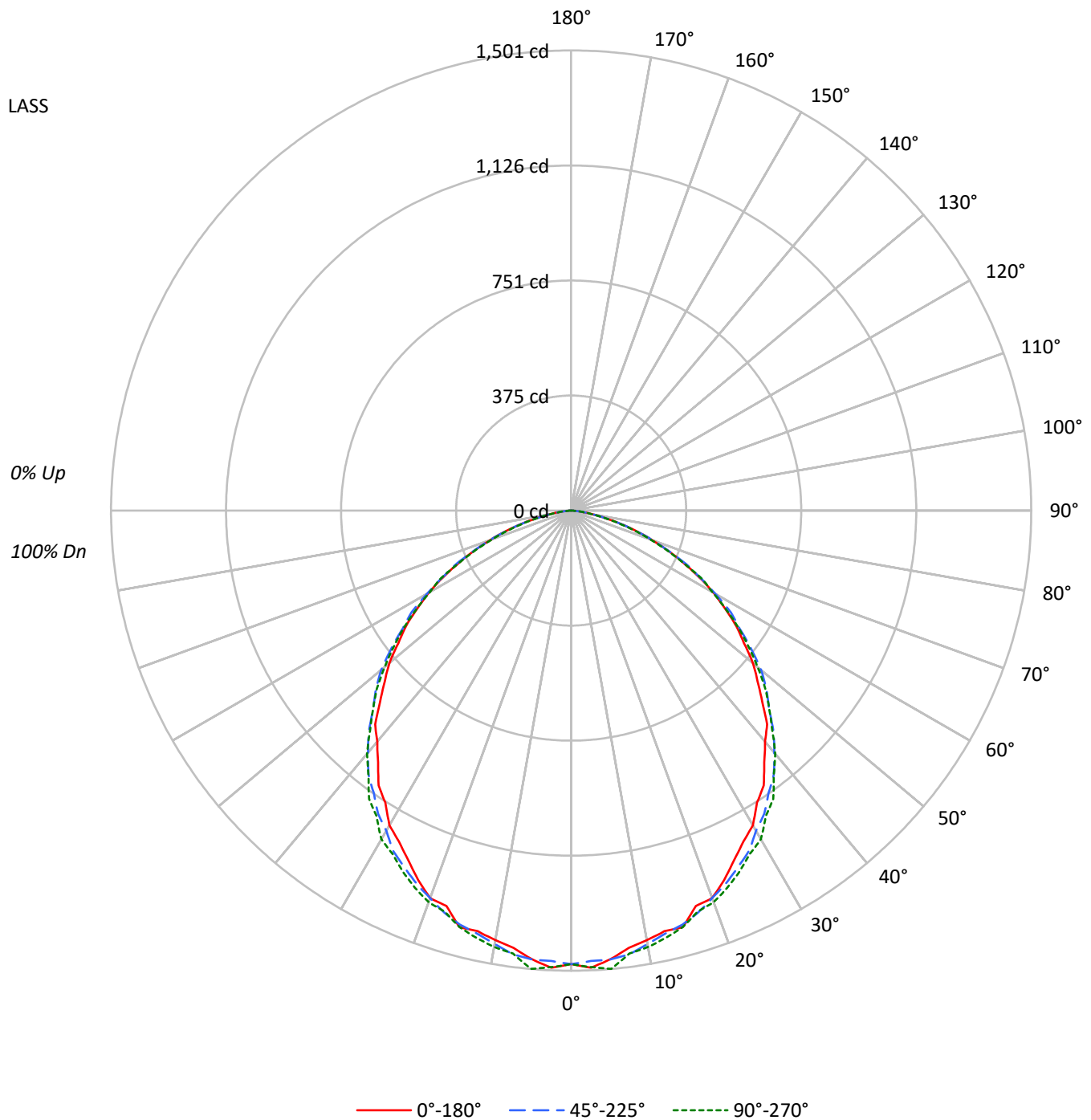
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3982	3982	3982
5°	3968	3970	4054
10°	3888	3922	3950
15°	3919	3897	3919
20°	3853	3853	3893
25°	3734	3816	3858
30°	3683	3747	3847
35°	3596	3690	3773
40°	3456	3622	3639
45°	3352	3471	3476
50°	3242	3388	3323
55°	3088	3149	3126
60°	2888	2917	2864
65°	2575	2641	2557
70°	2209	2217	2155
75°	1750	1746	1678
80°	1173	1139	1096
85°	636	630	590

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3560 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	139.2	3.7
10°-20°	394.4	10.6
20°-30°	591.0	15.8
30°-40°	700.4	18.8
40°-50°	701.7	18.8
50°-60°	595.6	16.0
60°-70°	401.6	10.8
70°-80°	176.5	4.7
80°-90°	28.7	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°	1124.6	30.2
0°-40°	1825.0	48.9
0°-60°	3122.3	83.7
0°-90°	3729.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3729.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1480	1480	1480	1480	1480	
5°	1469	1466	1470	1465	1501	138
15°	1407	1390	1399	1406	1407	392
25°	1258	1264	1285	1302	1299	581
35°	1095	1098	1123	1149	1148	680
45°	881	897	912	936	913	681
55°	658	654	671	666	666	586
65°	404	399	415	399	402	402
75°	168	165	168	156	161	180
85°	21	20	20	20	19	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1479.6	1479.6	1479.6	1479.6	1479.6
2.5°	1492.4	1481.1	1470.6	1482.8	1490.3
5°	1469.1	1465.6	1469.6	1465.2	1500.6
7.5°	1438.9	1452.1	1459.7	1454.9	1457.0
10°	1422.8	1418.3	1435.3	1447.1	1445.4
12.5°	1405.6	1412.5	1413.5	1426.3	1427.4
15°	1406.6	1390.4	1399.0	1406.2	1406.8
17.5°	1352.0	1369.5	1375.5	1392.1	1371.4
20°	1345.3	1332.5	1345.3	1362.3	1359.6
22.5°	1304.2	1289.9	1317.4	1332.5	1331.5
25°	1257.6	1264.5	1285.1	1301.9	1299.2
27.5°	1216.7	1224.7	1254.2	1277.3	1262.4
30°	1185.2	1181.2	1206.0	1226.6	1238.1
32.5°	1128.8	1143.3	1172.4	1192.8	1181.9
35°	1094.6	1097.9	1123.3	1149.3	1148.5
37.5°	1034.8	1049.9	1085.7	1092.9	1086.2
40°	983.8	998.9	1031.2	1039.0	1035.8
42.5°	946.2	948.9	976.6	985.6	971.2
45°	880.7	897.1	912.0	935.5	913.3
47.5°	824.9	832.5	864.6	870.9	859.3
50°	774.3	776.9	809.2	801.4	793.8
52.5°	710.7	721.9	740.1	738.5	729.6
55°	658.3	653.9	671.1	666.5	666.3
57.5°	595.5	603.1	617.2	610.0	598.3
60°	536.6	536.8	542.0	533.8	532.2
62.5°	471.1	473.4	474.5	464.4	480.8
65°	404.4	399.1	414.7	398.9	401.6
67.5°	343.1	345.8	344.2	334.3	338.1
70°	280.8	284.3	281.8	270.5	273.9
72.5°	223.9	219.7	222.4	208.2	214.7
75°	168.3	164.9	167.9	156.1	161.4
77.5°	114.6	117.3	115.4	109.1	112.7
80°	75.7	73.5	73.5	69.9	70.7
82.5°	44.1	42.0	41.5	40.3	42.0
85°	20.6	20.1	20.4	19.9	19.1
87.5°	7.5	7.6	7.6	7.3	6.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)