

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: P590364

Luminaire Tested: FSR-24-2-LD4-2STD-40-UNV-80-97-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590364
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-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3767.0 lumens
Efficiency: N/A
Efficacy: 113.1 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

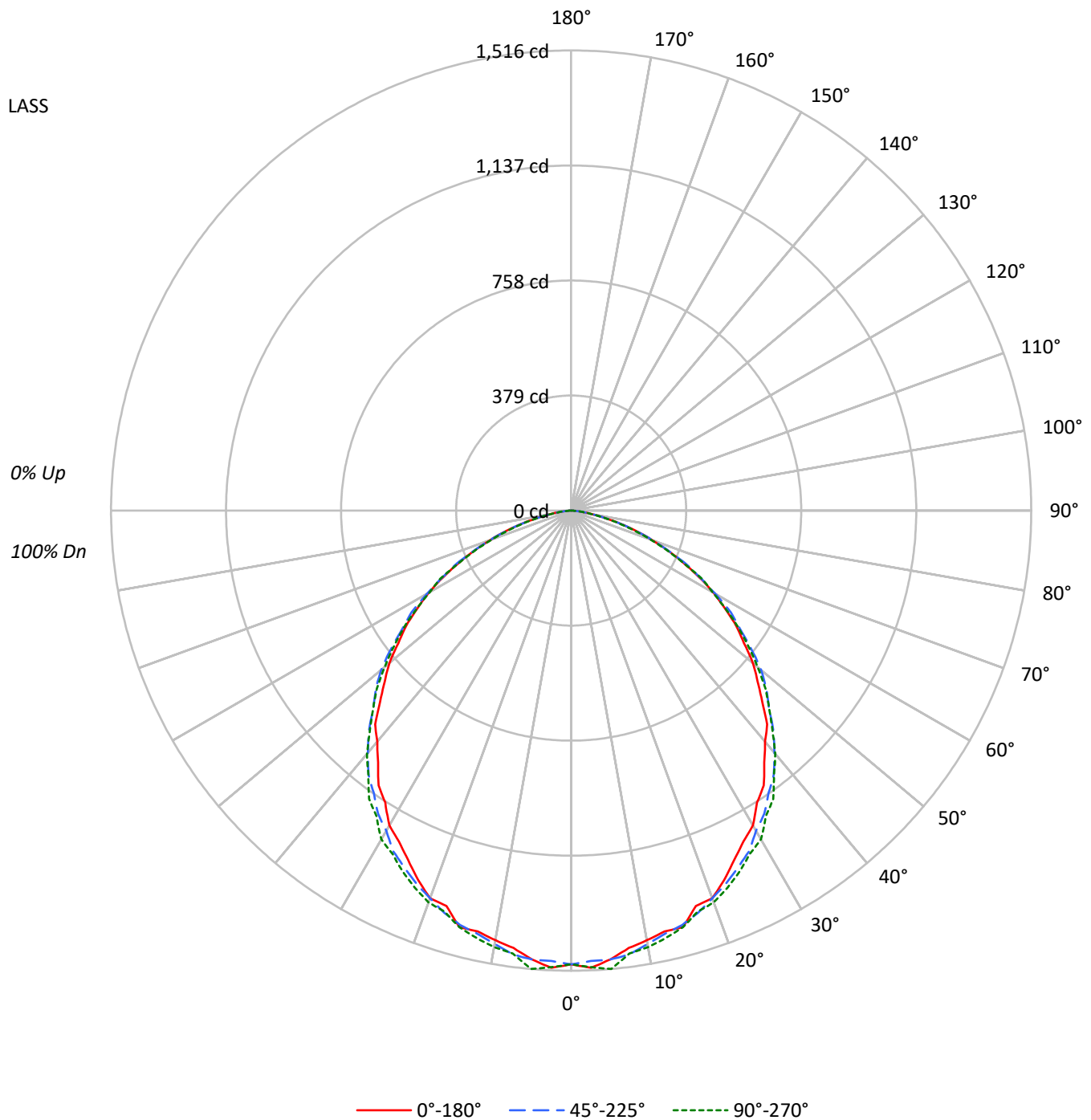
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4022	4022	4022
5°	4009	4010	4095
10°	3927	3962	3990
15°	3958	3937	3959
20°	3892	3892	3933
25°	3772	3855	3897
30°	3720	3786	3886
35°	3633	3728	3811
40°	3491	3659	3676
45°	3385	3506	3511
50°	3275	3422	3357
55°	3120	3180	3158
60°	2918	2947	2893
65°	2601	2668	2583
70°	2232	2239	2177
75°	1768	1763	1696
80°	1184	1151	1106
85°	642	636	596

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3596 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.6	3.7
10°-20°	398.5	10.6
20°-30°	597.0	15.8
30°-40°	707.5	18.8
40°-50°	708.8	18.8
50°-60°	601.7	16.0
60°-70°	405.7	10.8
70°-80°	178.3	4.7
80°-90°	29.0	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°	1136.0	30.2
0°-40°	1843.6	48.9
0°-60°	3154.1	83.7
0°-90°	3767.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3767.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1495	1495	1495	1495	1495	
5°	1484	1481	1485	1480	1516	140
15°	1421	1404	1413	1420	1421	396
25°	1270	1277	1298	1315	1312	587
35°	1106	1109	1135	1161	1160	687
45°	890	906	921	945	923	688
55°	665	661	678	673	673	592
65°	408	403	419	403	406	406
75°	170	166	170	158	163	182
85°	21	20	21	20	19	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1494.7	1494.7	1494.7	1494.7	1494.7
2.5°	1507.6	1496.2	1485.6	1497.9	1505.5
5°	1484.0	1480.6	1484.6	1480.2	1515.9
7.5°	1453.5	1466.9	1474.6	1469.8	1471.9
10°	1437.3	1432.7	1449.9	1461.8	1460.1
12.5°	1420.0	1426.9	1427.9	1440.8	1442.0
15°	1420.9	1404.5	1413.2	1420.5	1421.1
17.5°	1365.7	1383.5	1389.5	1406.3	1385.4
20°	1359.0	1346.1	1359.0	1376.2	1373.5
22.5°	1317.5	1303.0	1330.8	1346.1	1345.1
25°	1270.4	1277.4	1298.2	1315.2	1312.5
27.5°	1229.1	1237.2	1266.9	1290.3	1275.2
30°	1197.3	1193.2	1218.3	1239.1	1250.7
32.5°	1140.3	1155.0	1184.3	1205.0	1194.0
35°	1105.8	1109.1	1134.7	1161.0	1160.2
37.5°	1045.4	1060.6	1096.7	1104.1	1097.3
40°	993.9	1009.1	1041.7	1049.6	1046.4
42.5°	955.8	958.5	986.5	995.6	981.1
45°	889.6	906.2	921.3	945.0	922.6
47.5°	833.3	841.0	873.4	879.8	868.0
50°	782.2	784.9	817.5	809.6	801.8
52.5°	717.9	729.3	747.6	746.1	737.0
55°	665.0	660.6	677.9	673.3	673.1
57.5°	601.5	609.2	623.5	616.2	604.4
60°	542.1	542.3	547.5	539.2	537.6
62.5°	475.9	478.2	479.4	469.1	485.7
65°	408.5	403.1	419.0	402.9	405.6
67.5°	346.6	349.3	347.8	337.7	341.6
70°	283.7	287.2	284.6	273.3	276.7
72.5°	226.2	221.9	224.6	210.4	216.9
75°	170.0	166.5	169.6	157.7	163.1
77.5°	115.8	118.5	116.6	110.2	113.9
80°	76.4	74.3	74.3	70.6	71.4
82.5°	44.6	42.5	41.9	40.7	42.5
85°	20.8	20.3	20.6	20.1	19.3
87.5°	7.5	7.7	7.7	7.3	6.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)