

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: P590140

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

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590140
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-LD4-2HI-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

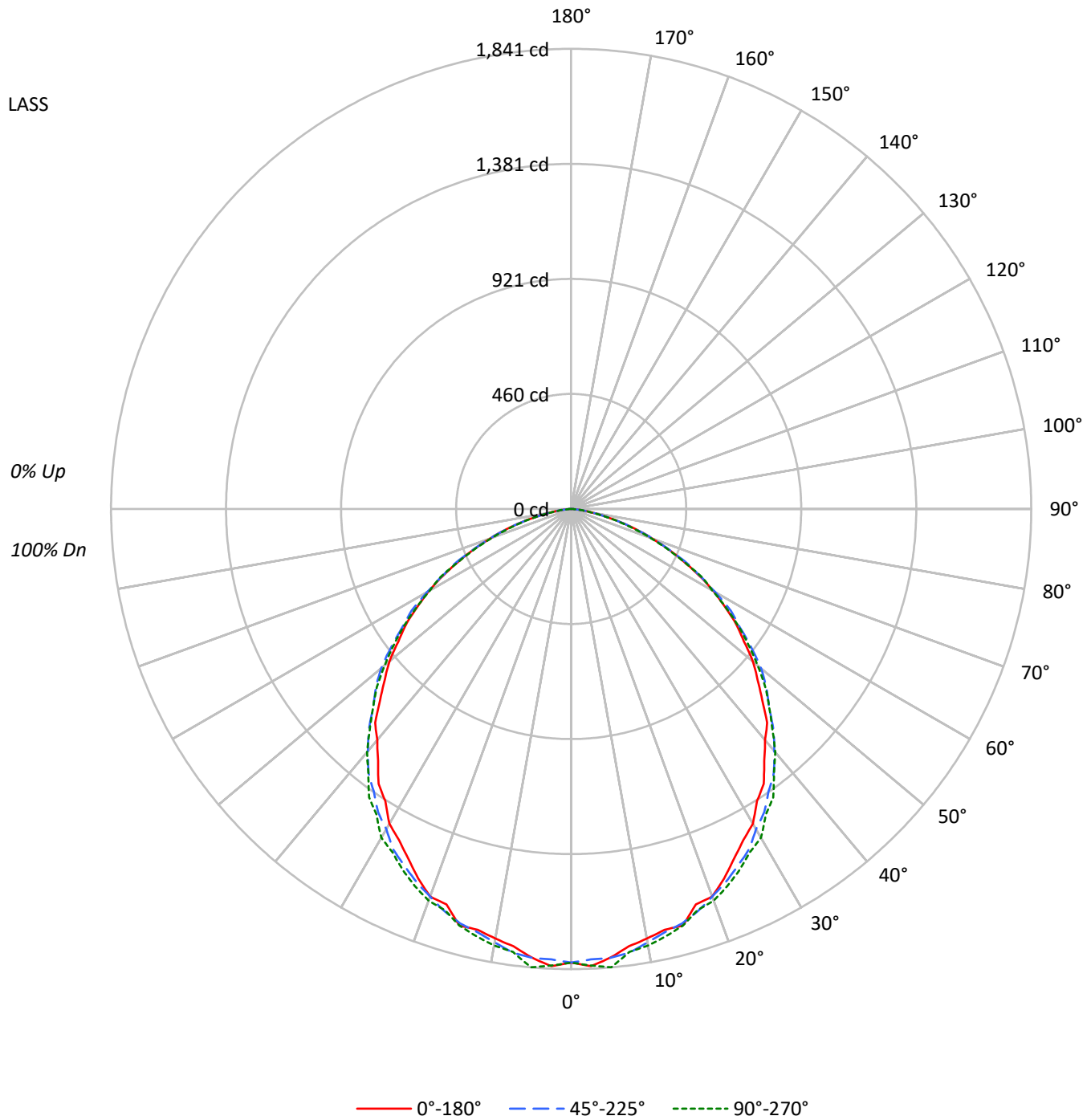
Lumens per Lamp: N/A
Luminaire Lumens: 4574.0 lumens
Efficiency: N/A
Efficacy: 105.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
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																		
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	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°	4884	4884	4884
5°	4868	4870	4972
10°	4769	4811	4844
15°	4807	4781	4807
20°	4725	4725	4776
25°	4580	4680	4732
30°	4517	4597	4719
35°	4411	4526	4628
40°	4239	4443	4463
45°	4111	4257	4263
50°	3976	4155	4076
55°	3788	3862	3834
60°	3542	3578	3513
65°	3159	3239	3137
70°	2710	2719	2644
75°	2146	2142	2059
80°	1438	1398	1344
85°	781	775	722

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4367 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	170.7	3.7
10°-20°	483.8	10.6
20°-30°	724.9	15.8
30°-40°	859.1	18.8
40°-50°	860.7	18.8
50°-60°	730.6	16.0
60°-70°	492.6	10.8
70°-80°	216.4	4.7
80°-90°	35.2	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°	1379.4	30.2
0°-40°	2238.5	48.9
0°-60°	3829.8	83.7
0°-90°	4574.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4574.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1815	1815	1815	1815	1815	
5°	1802	1798	1803	1797	1841	170
15°	1725	1705	1716	1725	1726	481
25°	1543	1551	1576	1597	1594	713
35°	1343	1347	1378	1410	1409	834
45°	1080	1100	1119	1148	1120	836
55°	808	802	823	818	817	718
65°	496	490	509	489	493	493
75°	206	202	206	191	198	221
85°	25	25	25	24	23	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1814.8	1814.8	1814.8	1814.8	1814.8
2.5°	1830.5	1816.7	1803.8	1818.8	1828.0
5°	1802.0	1797.7	1802.7	1797.3	1840.6
7.5°	1764.9	1781.1	1790.5	1784.6	1787.2
10°	1745.3	1739.6	1760.5	1775.0	1772.9
12.5°	1724.2	1732.6	1733.8	1749.5	1750.9
15°	1725.3	1705.4	1716.0	1724.9	1725.6
17.5°	1658.3	1679.9	1687.1	1707.5	1682.2
20°	1650.1	1634.4	1650.1	1671.0	1667.7
22.5°	1599.7	1582.2	1615.9	1634.4	1633.2
25°	1542.6	1551.0	1576.3	1596.9	1593.6
27.5°	1492.4	1502.3	1538.3	1566.7	1548.4
30°	1453.8	1448.8	1479.3	1504.6	1518.7
32.5°	1384.6	1402.4	1438.1	1463.1	1449.8
35°	1342.7	1346.7	1377.8	1409.7	1408.8
37.5°	1269.3	1287.9	1331.7	1340.6	1332.4
40°	1206.8	1225.3	1264.9	1274.5	1270.5
42.5°	1160.6	1163.9	1197.9	1208.9	1191.3
45°	1080.2	1100.4	1118.7	1147.5	1120.3
47.5°	1011.8	1021.2	1060.6	1068.3	1054.0
50°	949.7	953.0	992.6	983.0	973.6
52.5°	871.7	885.5	907.8	905.9	894.9
55°	807.5	802.1	823.2	817.6	817.3
57.5°	730.4	739.8	757.1	748.2	733.9
60°	658.2	658.5	664.8	654.7	652.8
62.5°	577.8	580.7	582.1	569.6	589.8
65°	496.1	489.5	508.7	489.3	492.6
67.5°	420.8	424.1	422.3	410.1	414.8
70°	344.5	348.7	345.6	331.8	336.0
72.5°	274.6	269.5	272.8	255.4	263.4
75°	206.4	202.2	206.0	191.4	198.0
77.5°	140.6	143.9	141.5	133.8	138.3
80°	92.8	90.2	90.2	85.8	86.7
82.5°	54.1	51.6	50.8	49.4	51.6
85°	25.3	24.6	25.1	24.4	23.4
87.5°	9.1	9.4	9.4	8.9	8.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)