

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: P590547

Luminaire Tested: FSR-24-2-LD4-3LO-35-UNV-93-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590547
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-LD4-3LO-35-UNV-93-96-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

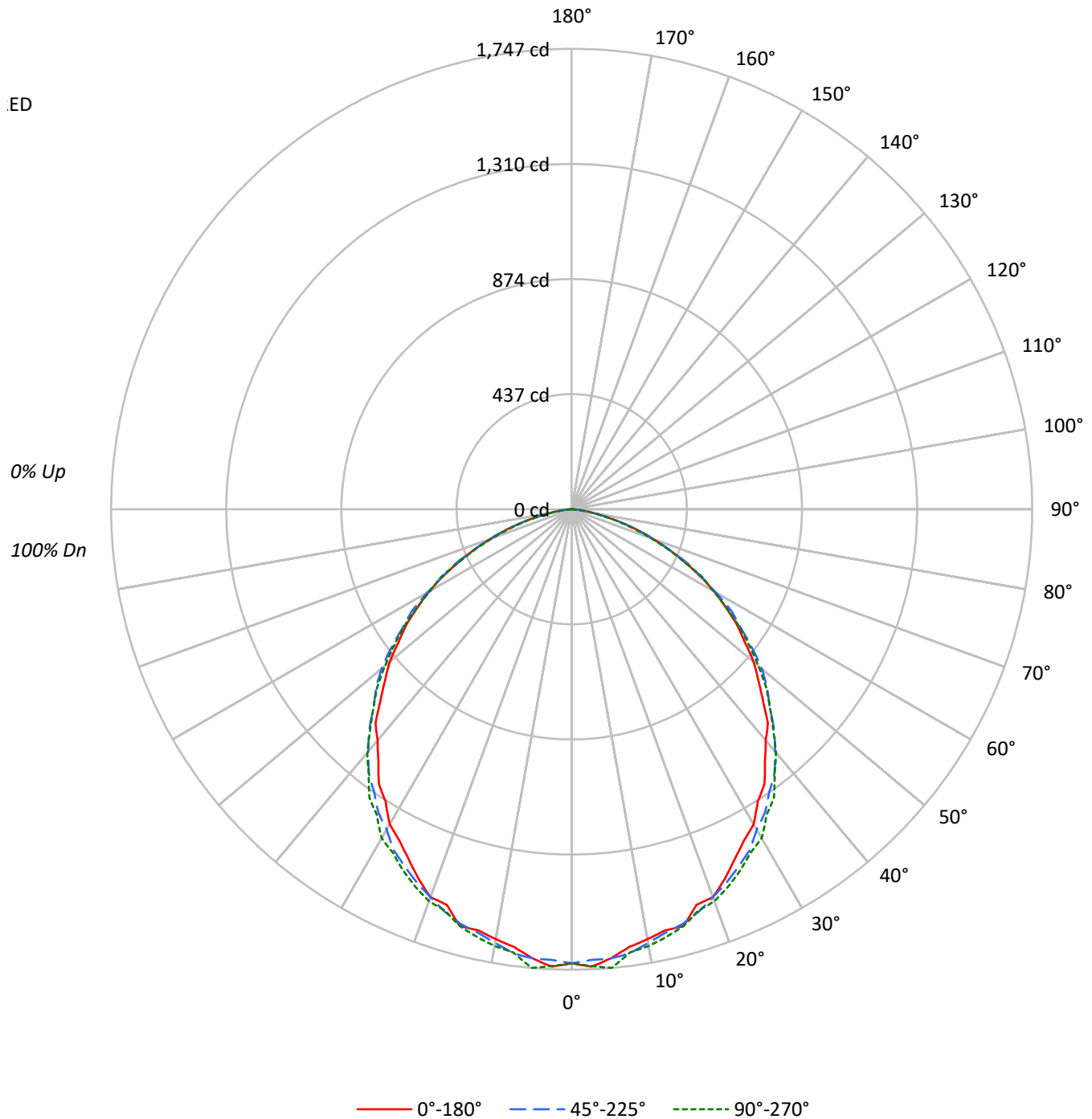
Lumens per Lamp: N/A
Luminaire Lumens: 4341.0 lumens
Efficiency: N/A
Efficacy: 123.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 35.1
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																												
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°	4635	4635	4635
5°	4620	4621	4719
10°	4526	4565	4598
15°	4562	4537	4562
20°	4485	4485	4532
25°	4347	4442	4491
30°	4287	4362	4479
35°	4186	4296	4392
40°	4023	4217	4236
45°	3902	4040	4046
50°	3773	3944	3868
55°	3596	3666	3639
60°	3362	3395	3335
65°	2998	3074	2977
70°	2572	2581	2509
75°	2037	2033	1954
80°	1365	1327	1275
85°	741	735	685

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4144 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.0	3.7
10°-20°	459.2	10.6
20°-30°	687.9	15.8
30°-40°	815.4	18.8
40°-50°	816.9	18.8
50°-60°	693.4	16.0
60°-70°	467.5	10.8
70°-80°	205.4	4.7
80°-90°	33.4	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°	1309.1	30.2
0°-40°	2124.5	48.9
0°-60°	3634.7	83.7
0°-90°	4341.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4341.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1722	1722	1722	1722	1722	
5°	1710	1706	1711	1706	1747	161
15°	1637	1618	1629	1637	1638	456
25°	1464	1472	1496	1516	1512	677
35°	1274	1278	1308	1338	1337	791
45°	1025	1044	1062	1089	1063	793
55°	766	761	781	776	776	682
65°	471	465	483	464	468	468
75°	196	192	196	182	188	210
85°	24	23	24	23	22	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1722.4	1722.4	1722.4	1722.4	1722.4
2.5°	1737.3	1724.2	1711.9	1726.2	1734.9
5°	1710.2	1706.2	1710.8	1705.7	1746.9
7.5°	1675.0	1690.4	1699.3	1693.7	1696.2
10°	1656.3	1651.0	1670.8	1684.6	1682.6
12.5°	1636.3	1644.3	1645.5	1660.4	1661.7
15°	1637.4	1618.5	1628.6	1637.0	1637.7
17.5°	1573.8	1594.3	1601.2	1620.5	1596.5
20°	1566.1	1551.2	1566.1	1585.9	1582.7
22.5°	1518.2	1501.6	1533.6	1551.2	1550.0
25°	1464.0	1472.0	1496.0	1515.6	1512.5
27.5°	1416.4	1425.7	1460.0	1486.9	1469.5
30°	1379.7	1375.0	1403.9	1428.0	1441.3
32.5°	1314.1	1331.0	1364.8	1388.6	1375.9
35°	1274.3	1278.1	1307.6	1337.9	1337.0
37.5°	1204.7	1222.2	1263.8	1272.3	1264.5
40°	1145.3	1162.9	1200.5	1209.6	1205.8
42.5°	1101.5	1104.6	1136.9	1147.3	1130.6
45°	1025.2	1044.3	1061.7	1089.0	1063.2
47.5°	960.3	969.2	1006.5	1013.9	1000.3
50°	901.3	904.5	942.0	932.9	924.0
52.5°	827.3	840.4	861.5	859.8	849.3
55°	766.4	761.2	781.3	775.9	775.7
57.5°	693.2	702.1	718.5	710.1	696.5
60°	624.7	624.9	630.9	621.4	619.6
62.5°	548.4	551.1	552.4	540.6	559.8
65°	470.8	464.6	482.8	464.3	467.5
67.5°	399.4	402.5	400.7	389.2	393.6
70°	326.9	330.9	328.0	314.9	318.9
72.5°	260.6	255.7	258.9	242.4	250.0
75°	195.9	191.9	195.5	181.7	187.9
77.5°	133.4	136.5	134.3	127.0	131.2
80°	88.1	85.6	85.6	81.4	82.3
82.5°	51.4	48.9	48.3	46.9	48.9
85°	24.0	23.4	23.8	23.1	22.2
87.5°	8.7	8.9	8.9	8.5	8.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)