

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: P590539

Luminaire Tested: FSR-24-2-LD4-3LO-35-UNV-82-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590539
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-82-96-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4029.0 lumens
Efficiency: N/A
Efficacy: 114.8 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

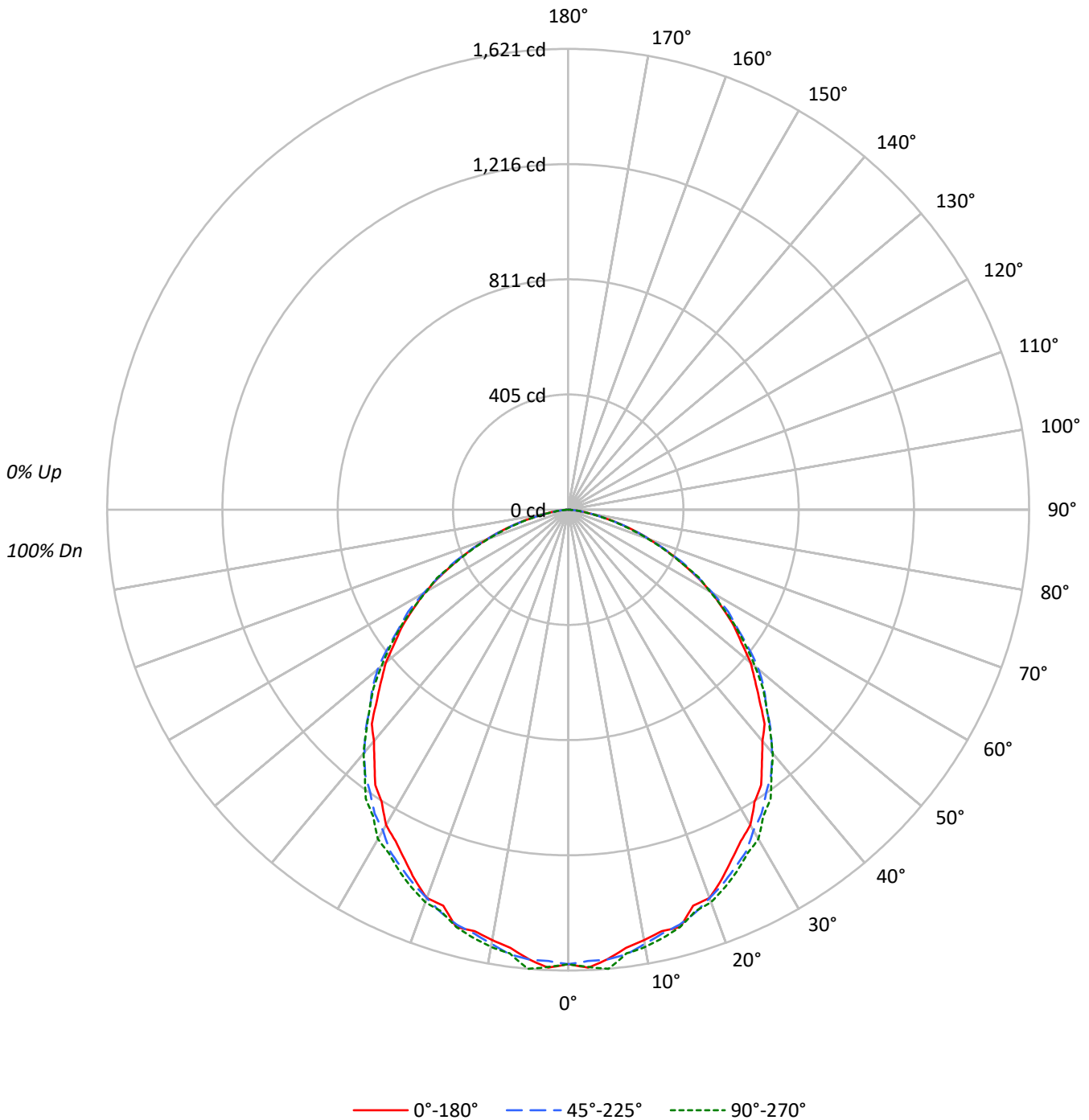
Input Watts (W): 35.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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°	4302	4302	4302
5°	4288	4289	4380
10°	4201	4237	4267
15°	4234	4211	4235
20°	4162	4162	4207
25°	4035	4123	4168
30°	3979	4049	4157
35°	3885	3987	4076
40°	3734	3914	3931
45°	3621	3750	3755
50°	3502	3660	3590
55°	3337	3402	3377
60°	3120	3152	3095
65°	2783	2853	2763
70°	2387	2395	2329
75°	1890	1886	1813
80°	1266	1232	1184
85°	689	682	636

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°

Vertical Angle: 45°

Luminance: 3847 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.4	3.7
10°-20°	426.2	10.6
20°-30°	638.5	15.8
30°-40°	756.7	18.8
40°-50°	758.1	18.8
50°-60°	643.5	16.0
60°-70°	433.9	10.8
70°-80°	190.6	4.7
80°-90°	31.0	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°	1215.0	30.2
0°-40°	1971.8	48.9
0°-60°	3373.5	83.7
0°-90°	4029.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4029.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1599	1599	1599	1599	1599	
5°	1587	1584	1588	1583	1621	150
15°	1520	1502	1512	1519	1520	423
25°	1359	1366	1388	1407	1404	628
35°	1183	1186	1214	1242	1241	734
45°	952	969	985	1011	987	736
55°	711	706	725	720	720	633
65°	437	431	448	431	434	435
75°	182	178	181	169	174	195
85°	22	22	22	22	21	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1598.6	1598.6	1598.6	1598.6	1598.6
2.5°	1612.4	1600.3	1588.9	1602.1	1610.2
5°	1587.3	1583.5	1587.9	1583.1	1621.3
7.5°	1554.6	1568.9	1577.1	1572.0	1574.2
10°	1537.3	1532.3	1550.7	1563.5	1561.7
12.5°	1518.7	1526.2	1527.2	1541.0	1542.3
15°	1519.8	1502.2	1511.5	1519.3	1520.0
17.5°	1460.7	1479.7	1486.1	1504.1	1481.8
20°	1453.5	1439.7	1453.5	1471.9	1469.0
22.5°	1409.1	1393.6	1423.4	1439.7	1438.6
25°	1358.8	1366.2	1388.5	1406.6	1403.8
27.5°	1314.6	1323.3	1355.0	1380.0	1363.9
30°	1280.5	1276.2	1303.0	1325.3	1337.7
32.5°	1219.6	1235.3	1266.7	1288.8	1277.0
35°	1182.7	1186.2	1213.7	1241.7	1240.9
37.5°	1118.1	1134.4	1173.0	1180.8	1173.6
40°	1063.0	1079.3	1114.2	1122.6	1119.1
42.5°	1022.3	1025.2	1055.1	1064.8	1049.4
45°	951.5	969.3	985.4	1010.8	986.8
47.5°	891.3	899.5	934.2	941.0	928.4
50°	836.6	839.4	874.3	865.9	857.6
52.5°	767.8	780.0	799.6	798.0	788.3
55°	711.3	706.5	725.1	720.1	719.9
57.5°	643.4	651.6	666.9	659.1	646.5
60°	579.8	580.0	585.6	576.7	575.0
62.5°	509.0	511.5	512.7	501.8	519.5
65°	437.0	431.2	448.1	431.0	433.9
67.5°	370.7	373.6	371.9	361.2	365.3
70°	303.4	307.1	304.4	292.3	296.0
72.5°	241.9	237.4	240.3	225.0	232.0
75°	181.8	178.1	181.4	168.6	174.4
77.5°	123.8	126.7	124.7	117.9	121.8
80°	81.7	79.5	79.5	75.5	76.4
82.5°	47.7	45.4	44.8	43.6	45.4
85°	22.3	21.7	22.1	21.5	20.6
87.5°	8.0	8.3	8.3	7.8	7.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)