

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: P590544

Luminaire Tested: FSR-24-2-LD4-3LO-35-UNV-93-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590544
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-93-87-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4107.0 lumens
Efficiency: N/A
Efficacy: 117.0 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

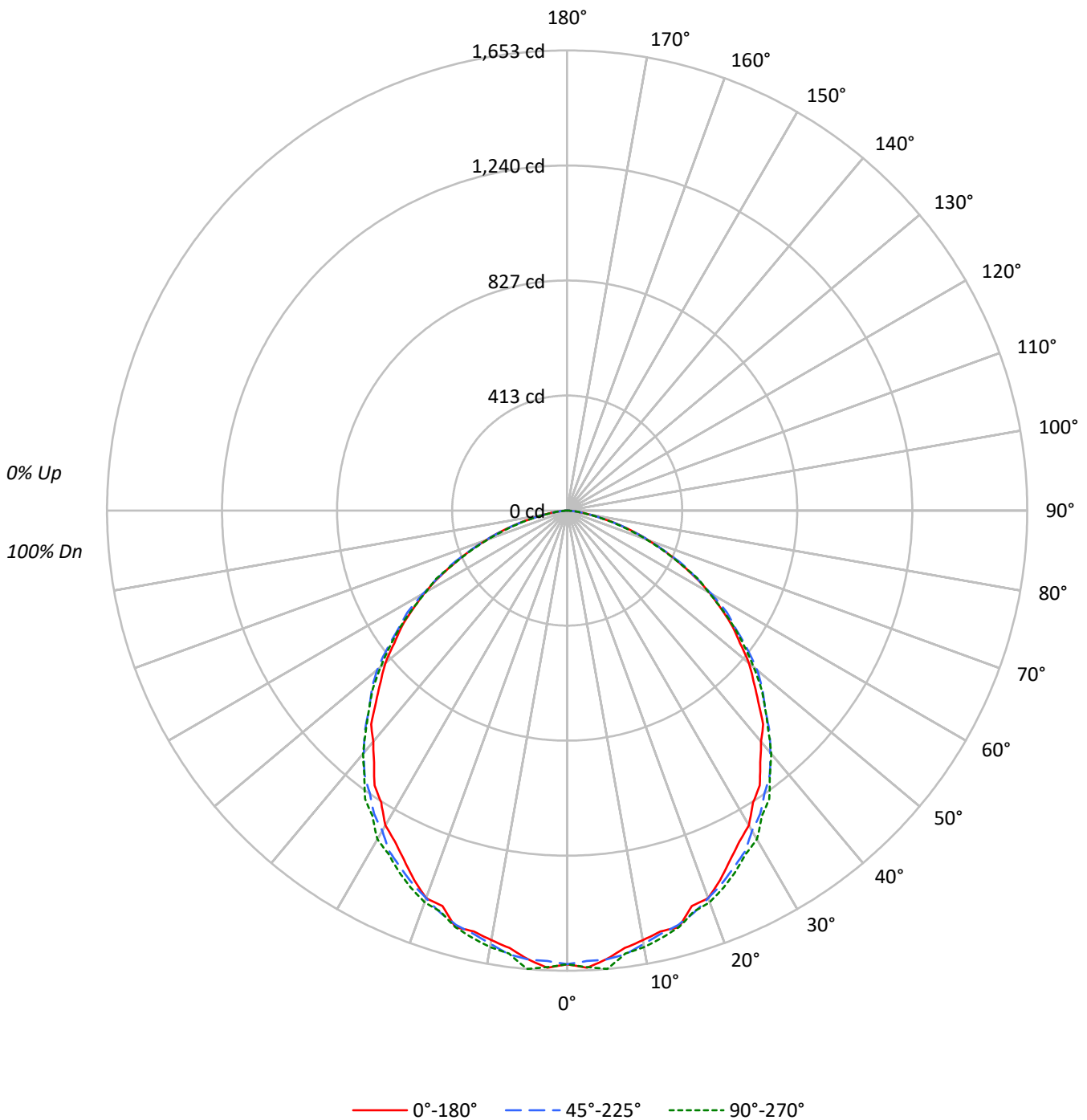
Input Watts (W): 35.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4385	4385	4385
5°	4371	4372	4464
10°	4282	4319	4350
15°	4316	4293	4316
20°	4243	4243	4288
25°	4113	4203	4249
30°	4056	4127	4237
35°	3960	4064	4155
40°	3806	3990	4007
45°	3691	3823	3828
50°	3570	3731	3660
55°	3401	3468	3443
60°	3181	3212	3155
65°	2836	2909	2816
70°	2434	2441	2374
75°	1928	1922	1849
80°	1291	1255	1206
85°	701	695	648

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3921 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	153.3	3.7
10°-20°	434.4	10.6
20°-30°	650.9	15.8
30°-40°	771.4	18.8
40°-50°	772.8	18.8
50°-60°	656.0	16.0
60°-70°	442.3	10.8
70°-80°	194.3	4.7
80°-90°	31.6	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°	1238.6	30.2
0°-40°	2010.0	48.9
0°-60°	3438.8	83.7
0°-90°	4107.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4107.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1630	1630	1630	1630	1630	
5°	1618	1614	1619	1614	1653	153
15°	1549	1531	1541	1549	1549	432
25°	1385	1393	1415	1434	1431	640
35°	1206	1209	1237	1266	1265	749
45°	970	988	1004	1030	1006	750
55°	725	720	739	734	734	645
65°	445	440	457	439	442	443
75°	185	182	185	172	178	199
85°	23	22	22	22	21	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1629.6	1629.6	1629.6	1629.6	1629.6
2.5°	1643.7	1631.2	1619.7	1633.1	1641.3
5°	1618.0	1614.2	1618.6	1613.8	1652.7
7.5°	1584.7	1599.3	1607.7	1602.4	1604.7
10°	1567.1	1562.0	1580.7	1593.8	1591.9
12.5°	1548.1	1555.7	1556.8	1570.9	1572.1
15°	1549.2	1531.3	1540.8	1548.8	1549.4
17.5°	1489.0	1508.4	1514.9	1533.2	1510.5
20°	1481.6	1467.5	1481.6	1500.4	1497.4
22.5°	1436.4	1420.6	1450.9	1467.5	1466.5
25°	1385.1	1392.6	1415.4	1433.9	1430.9
27.5°	1340.0	1348.9	1381.3	1406.7	1390.3
30°	1305.3	1300.9	1328.3	1351.0	1363.6
32.5°	1243.3	1259.2	1291.2	1313.7	1301.7
35°	1205.6	1209.2	1237.2	1265.8	1264.9
37.5°	1139.7	1156.4	1195.7	1203.7	1196.3
40°	1083.6	1100.2	1135.7	1144.4	1140.8
42.5°	1042.1	1045.1	1075.6	1085.5	1069.7
45°	969.9	988.0	1004.5	1030.3	1005.9
47.5°	908.5	916.9	952.3	959.2	946.4
50°	852.8	855.7	891.3	882.6	874.2
52.5°	782.7	795.1	815.1	813.4	803.5
55°	725.0	720.2	739.1	734.1	733.9
57.5°	655.8	664.2	679.8	671.8	659.0
60°	591.0	591.2	596.9	587.9	586.2
62.5°	518.8	521.4	522.6	511.5	529.6
65°	445.4	439.5	456.8	439.3	442.3
67.5°	377.9	380.8	379.1	368.2	372.4
70°	309.3	313.1	310.3	297.9	301.7
72.5°	246.6	242.0	244.9	229.3	236.5
75°	185.4	181.6	184.9	171.9	177.8
77.5°	126.2	129.2	127.1	120.1	124.1
80°	83.3	81.0	81.0	77.0	77.8
82.5°	48.6	46.3	45.7	44.4	46.3
85°	22.7	22.1	22.5	21.9	21.0
87.5°	8.2	8.4	8.4	8.0	7.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)