

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: P590519

Luminaire Tested: FSR-24-2-LD4-3LO-35-UNV-80-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590519
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-80-86-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4236.0 lumens
Efficiency: N/A
Efficacy: 120.7 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

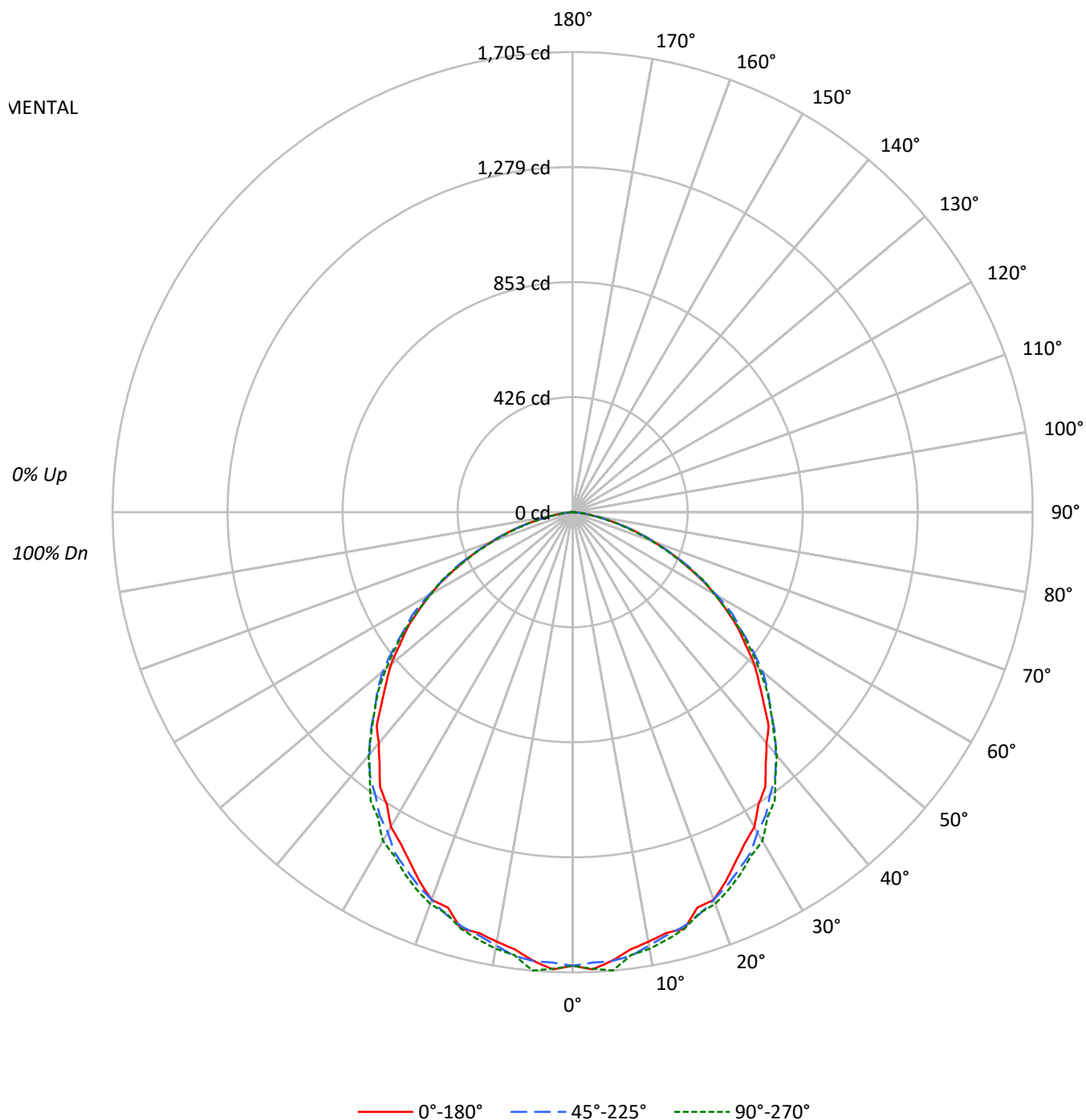
Input Watts (W): 35.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	4523	4523	4523
5°	4508	4510	4605
10°	4417	4455	4486
15°	4451	4427	4452
20°	4376	4376	4423
25°	4242	4334	4382
30°	4183	4257	4370
35°	4085	4192	4286
40°	3926	4115	4133
45°	3807	3943	3948
50°	3682	3849	3775
55°	3508	3577	3551
60°	3281	3314	3254
65°	2925	3000	2905
70°	2510	2519	2448
75°	1988	1984	1907
80°	1331	1294	1244
85°	722	716	670

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°

Vertical Angle: 45°

Luminance: 4044 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	158.1	3.7
10°-20°	448.1	10.6
20°-30°	671.3	15.8
30°-40°	795.6	18.8
40°-50°	797.1	18.8
50°-60°	676.6	16.0
60°-70°	456.2	10.8
70°-80°	200.4	4.7
80°-90°	32.6	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°	1277.5	30.2
0°-40°	2073.1	48.9
0°-60°	3546.8	83.7
0°-90°	4236.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4236.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1681	1681	1681	1681	1681	
5°	1669	1665	1670	1664	1705	157
15°	1598	1579	1589	1597	1598	445
25°	1429	1436	1460	1479	1476	660
35°	1244	1247	1276	1306	1305	772
45°	1000	1019	1036	1063	1038	774
55°	748	743	762	757	757	665
65°	459	453	471	453	456	457
75°	191	187	191	177	183	205
85°	23	23	23	23	22	34
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1680.7	1680.7	1680.7	1680.7	1680.7
2.5°	1695.3	1682.5	1670.5	1684.4	1692.9
5°	1668.8	1664.9	1669.5	1664.5	1704.6
7.5°	1634.5	1649.5	1658.2	1652.7	1655.1
10°	1616.3	1611.1	1630.4	1643.8	1641.9
12.5°	1596.8	1604.6	1605.7	1620.2	1621.5
15°	1597.8	1579.4	1589.2	1597.4	1598.1
17.5°	1535.8	1555.7	1562.5	1581.3	1557.9
20°	1528.2	1513.6	1528.2	1547.5	1544.5
22.5°	1481.5	1465.2	1496.5	1513.6	1512.6
25°	1428.6	1436.4	1459.8	1478.9	1475.9
27.5°	1382.1	1391.2	1424.7	1450.9	1434.0
30°	1346.3	1341.8	1370.0	1393.4	1406.4
32.5°	1282.3	1298.8	1331.8	1355.0	1342.6
35°	1243.5	1247.2	1276.0	1305.5	1304.7
37.5°	1175.5	1192.7	1233.3	1241.5	1233.9
40°	1117.6	1134.7	1171.4	1180.3	1176.6
42.5°	1074.8	1077.9	1109.4	1119.6	1103.3
45°	1000.4	1019.1	1036.0	1062.7	1037.5
47.5°	937.0	945.7	982.2	989.3	976.1
50°	879.5	882.6	919.3	910.4	901.7
52.5°	807.3	820.1	840.7	839.0	828.8
55°	747.8	742.8	762.4	757.1	756.9
57.5°	676.4	685.1	701.2	692.9	679.7
60°	609.6	609.8	615.7	606.3	604.6
62.5°	535.1	537.7	539.1	527.5	546.2
65°	459.4	453.3	471.1	453.1	456.2
67.5°	389.7	392.8	391.1	379.8	384.1
70°	319.0	322.9	320.1	307.3	311.2
72.5°	254.3	249.6	252.6	236.5	243.9
75°	191.2	187.3	190.8	177.3	183.4
77.5°	130.2	133.2	131.1	123.9	128.0
80°	85.9	83.5	83.5	79.4	80.3
82.5°	50.1	47.7	47.1	45.8	47.7
85°	23.4	22.8	23.2	22.6	21.7
87.5°	8.5	8.7	8.7	8.2	7.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)