

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: P590527

Luminaire Tested: FSR-24-2-LD4-3LO-35-UNV-81-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590527
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-81-86-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4024.0 lumens
Efficiency: N/A
Efficacy: 114.6 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

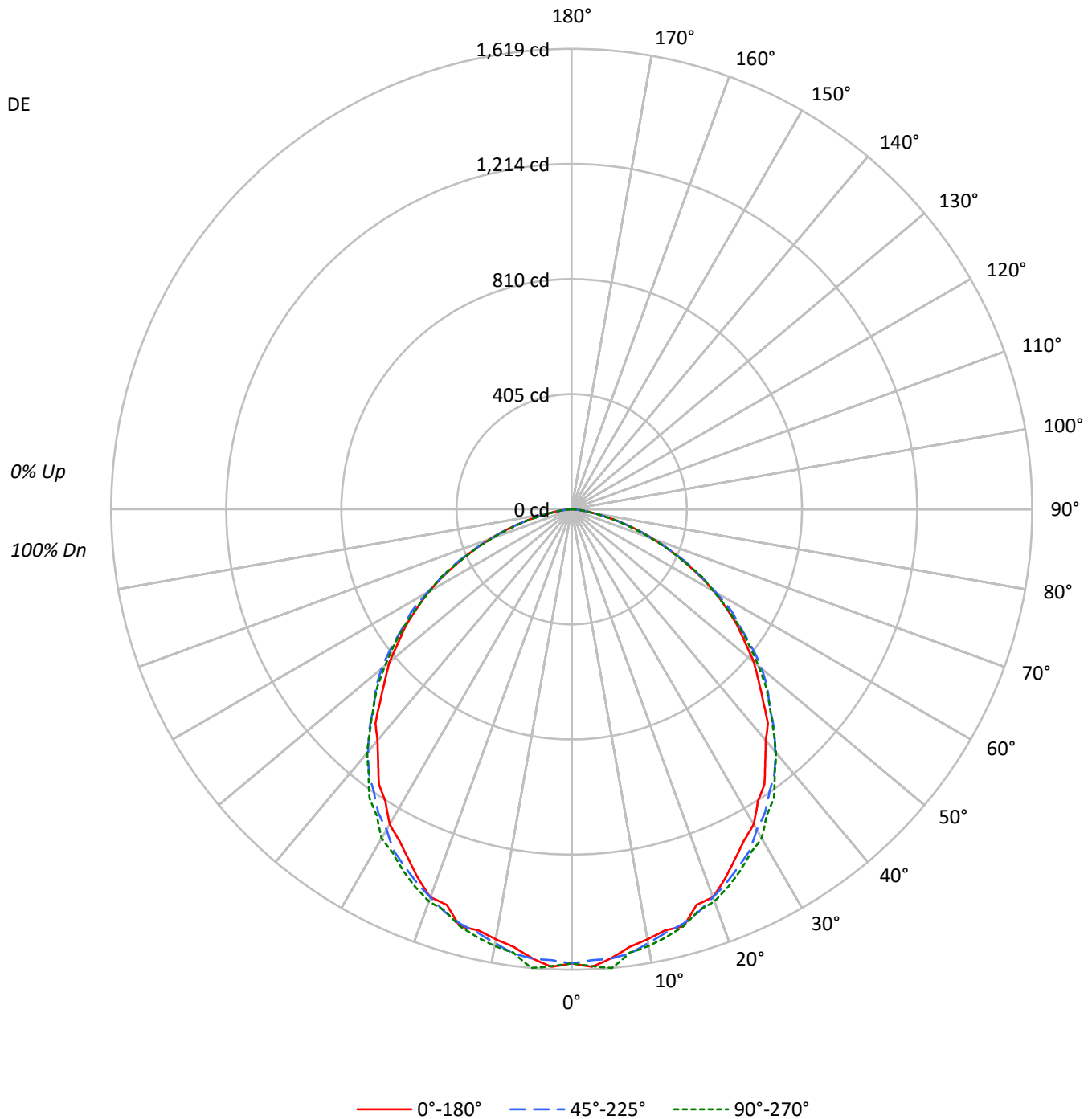
Input Watts (W): 35.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4296	4296	4296
5°	4282	4284	4374
10°	4195	4232	4262
15°	4229	4206	4229
20°	4157	4157	4202
25°	4029	4118	4163
30°	3974	4044	4151
35°	3880	3982	4072
40°	3730	3909	3926
45°	3616	3745	3751
50°	3498	3656	3586
55°	3333	3398	3373
60°	3117	3147	3091
65°	2779	2849	2759
70°	2384	2393	2326
75°	1888	1884	1811
80°	1265	1230	1182
85°	689	682	636

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3842 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.2	3.7
10°-20°	425.6	10.6
20°-30°	637.7	15.8
30°-40°	755.8	18.8
40°-50°	757.2	18.8
50°-60°	642.7	16.0
60°-70°	433.3	10.8
70°-80°	190.4	4.7
80°-90°	30.9	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°	1213.5	30.2
0°-40°	1969.4	48.9
0°-60°	3369.3	83.7
0°-90°	4024.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4024.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1597	1597	1597	1597	1597	
5°	1585	1582	1586	1581	1619	149
15°	1518	1500	1510	1518	1518	423
25°	1357	1364	1387	1405	1402	627
35°	1181	1185	1212	1240	1239	733
45°	950	968	984	1010	986	735
55°	710	706	724	719	719	632
65°	436	431	448	430	433	434
75°	182	178	181	168	174	195
85°	22	22	22	21	21	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1596.6	1596.6	1596.6	1596.6	1596.6
2.5°	1610.4	1598.3	1586.9	1600.1	1608.2
5°	1585.3	1581.6	1585.9	1581.2	1619.3
7.5°	1552.7	1566.9	1575.2	1570.0	1572.3
10°	1535.4	1530.4	1548.8	1561.6	1559.7
12.5°	1516.8	1524.3	1525.3	1539.1	1540.3
15°	1517.9	1500.4	1509.6	1517.5	1518.1
17.5°	1458.9	1477.9	1484.3	1502.2	1479.9
20°	1451.7	1437.9	1451.7	1470.0	1467.2
22.5°	1407.4	1391.9	1421.6	1437.9	1436.9
25°	1357.1	1364.5	1386.8	1404.9	1402.0
27.5°	1313.0	1321.6	1353.4	1378.3	1362.2
30°	1278.9	1274.6	1301.4	1323.7	1336.0
32.5°	1218.1	1233.8	1265.1	1287.2	1275.4
35°	1181.2	1184.7	1212.2	1240.2	1239.4
37.5°	1116.7	1133.0	1171.5	1179.4	1172.2
40°	1061.7	1078.0	1112.8	1121.2	1117.7
42.5°	1021.1	1023.9	1053.8	1063.5	1048.1
45°	950.3	968.1	984.2	1009.5	985.6
47.5°	890.2	898.4	933.0	939.8	927.3
50°	835.5	838.4	873.2	864.8	856.5
52.5°	766.9	779.0	798.6	797.0	787.3
55°	710.4	705.6	724.2	719.3	719.0
57.5°	642.6	650.8	666.1	658.2	645.7
60°	579.1	579.3	584.8	576.0	574.3
62.5°	508.4	510.8	512.1	501.1	518.9
65°	436.4	430.6	447.5	430.4	433.3
67.5°	370.2	373.1	371.5	360.8	364.9
70°	303.0	306.7	304.1	291.9	295.6
72.5°	241.6	237.1	240.0	224.7	231.7
75°	181.6	177.9	181.2	168.4	174.2
77.5°	123.7	126.6	124.5	117.7	121.6
80°	81.6	79.4	79.4	75.5	76.3
82.5°	47.6	45.4	44.7	43.5	45.4
85°	22.3	21.6	22.1	21.4	20.6
87.5°	8.0	8.2	8.2	7.8	7.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)