

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: P590531

Luminaire Tested: FSR-24-2-LD4-3LO-35-UNV-81-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590531
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-81-96-EDD
Description: 2X2 FSR TROFFER WITH .156 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: 4116.0 lumens
Efficiency: N/A
Efficacy: 117.3 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

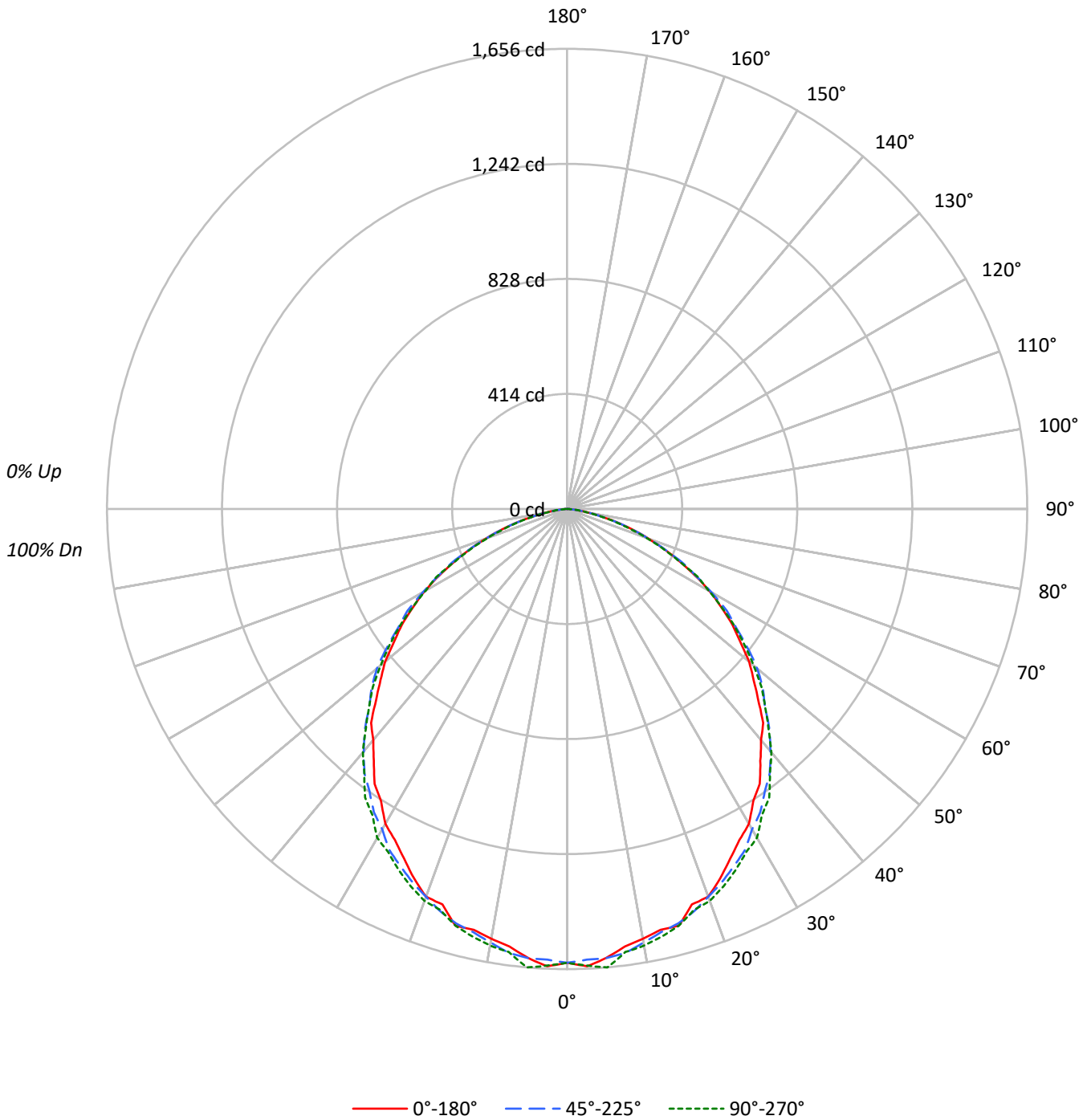
Input Watts (W): 35.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4395	4395	4395
5°	4380	4382	4474
10°	4291	4329	4359
15°	4325	4302	4326
20°	4252	4252	4298
25°	4122	4212	4258
30°	4065	4136	4246
35°	3969	4073	4164
40°	3815	3998	4016
45°	3699	3831	3836
50°	3578	3739	3668
55°	3409	3476	3451
60°	3188	3219	3162
65°	2842	2915	2822
70°	2439	2447	2379
75°	1932	1927	1853
80°	1294	1258	1209
85°	704	698	651

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3930 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	153.6	3.7
10°-20°	435.4	10.6
20°-30°	652.3	15.8
30°-40°	773.1	18.8
40°-50°	774.5	18.8
50°-60°	657.4	16.0
60°-70°	443.3	10.8
70°-80°	194.8	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°	1241.3	30.2
0°-40°	2014.4	48.9
0°-60°	3446.3	83.7
0°-90°	4116.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4116.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1633	1633	1633	1633	1633	
5°	1622	1618	1622	1617	1656	153
15°	1553	1535	1544	1552	1553	433
25°	1388	1396	1418	1437	1434	642
35°	1208	1212	1240	1268	1268	750
45°	972	990	1007	1033	1008	752
55°	727	722	741	736	736	646
65°	446	440	458	440	443	444
75°	186	182	185	172	178	199
85°	23	22	23	22	21	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1633.1	1633.1	1633.1	1633.1	1633.1
2.5°	1647.3	1634.8	1623.2	1636.7	1644.9
5°	1621.5	1617.7	1622.2	1617.3	1656.3
7.5°	1588.2	1602.8	1611.2	1605.9	1608.2
10°	1570.5	1565.4	1584.2	1597.3	1595.4
12.5°	1551.5	1559.1	1560.2	1574.3	1575.6
15°	1552.6	1534.7	1544.1	1552.2	1552.8
17.5°	1492.3	1511.7	1518.2	1536.6	1513.8
20°	1484.9	1470.8	1484.9	1503.7	1500.7
22.5°	1439.6	1423.7	1454.1	1470.8	1469.7
25°	1388.1	1395.7	1418.5	1437.0	1434.1
27.5°	1343.0	1351.8	1384.3	1409.8	1393.4
30°	1308.2	1303.8	1331.2	1353.9	1366.6
32.5°	1246.0	1262.0	1294.1	1316.6	1304.6
35°	1208.2	1211.8	1239.9	1268.5	1267.7
37.5°	1142.2	1158.9	1198.3	1206.3	1199.0
40°	1085.9	1102.6	1138.2	1146.9	1143.3
42.5°	1044.4	1047.4	1077.9	1087.8	1072.0
45°	972.1	990.2	1006.7	1032.6	1008.1
47.5°	910.5	918.9	954.4	961.3	948.5
50°	854.6	857.6	893.2	884.6	876.1
52.5°	784.4	796.8	816.9	815.2	805.3
55°	726.6	721.8	740.8	735.7	735.5
57.5°	657.3	665.7	681.3	673.3	660.4
60°	592.3	592.5	598.2	589.1	587.5
62.5°	520.0	522.5	523.8	512.6	530.7
65°	446.4	440.5	457.8	440.3	443.2
67.5°	378.7	381.7	380.0	369.0	373.2
70°	310.0	313.8	311.0	298.6	302.4
72.5°	247.1	242.5	245.4	229.8	237.0
75°	185.8	182.0	185.3	172.3	178.2
77.5°	126.5	129.5	127.4	120.4	124.4
80°	83.5	81.2	81.2	77.2	78.0
82.5°	48.7	46.4	45.8	44.5	46.4
85°	22.8	22.1	22.6	21.9	21.1
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)