

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: P590339

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

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590339
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-LD4-2STD-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: 3675.0 lumens
Efficiency: N/A
Efficacy: 110.4 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

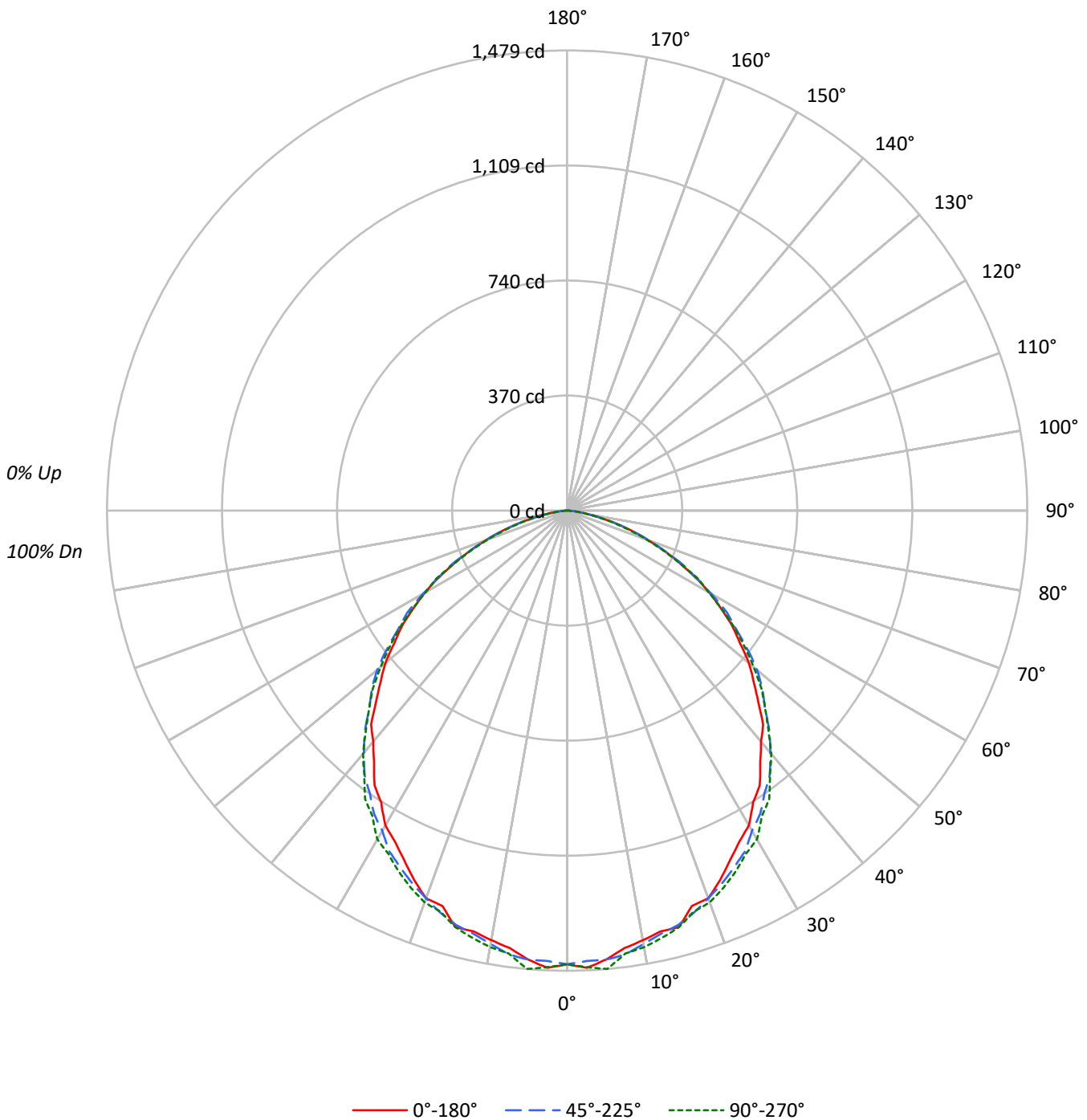
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3924	3924	3924
5°	3911	3913	3995
10°	3831	3865	3892
15°	3862	3841	3862
20°	3797	3797	3837
25°	3680	3760	3802
30°	3629	3693	3791
35°	3544	3637	3718
40°	3406	3570	3586
45°	3303	3420	3425
50°	3195	3339	3275
55°	3044	3103	3081
60°	2846	2875	2823
65°	2538	2602	2520
70°	2178	2185	2124
75°	1725	1721	1654
80°	1156	1124	1080
85°	627	621	580

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3509 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.2	3.7
10°-20°	388.7	10.6
20°-30°	582.4	15.8
30°-40°	690.3	18.8
40°-50°	691.5	18.8
50°-60°	587.0	16.0
60°-70°	395.8	10.8
70°-80°	173.9	4.7
80°-90°	28.3	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°	1108.3	30.2
0°-40°	1798.6	48.9
0°-60°	3077.1	83.7
0°-90°	3675.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3675.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1458	1458	1458	1458	1458	
5°	1448	1444	1448	1444	1479	136
15°	1386	1370	1379	1386	1386	386
25°	1239	1246	1266	1283	1280	573
35°	1079	1082	1107	1133	1132	670
45°	868	884	899	922	900	671
55°	649	644	661	657	657	577
65°	399	393	409	393	396	396
75°	166	162	166	154	159	178
85°	20	20	20	20	19	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1458.1	1458.1	1458.1	1458.1	1458.1
2.5°	1470.8	1459.7	1449.3	1461.3	1468.7
5°	1447.8	1444.4	1448.4	1444.0	1478.9
7.5°	1418.0	1431.0	1438.6	1433.9	1435.9
10°	1402.2	1397.7	1414.5	1426.1	1424.4
12.5°	1385.3	1392.1	1393.0	1405.6	1406.7
15°	1386.2	1370.2	1378.7	1385.9	1386.4
17.5°	1332.4	1349.7	1355.5	1371.9	1351.6
20°	1325.8	1313.2	1325.8	1342.5	1339.9
22.5°	1285.3	1271.2	1298.3	1313.2	1312.2
25°	1239.4	1246.2	1266.5	1283.1	1280.4
27.5°	1199.1	1207.0	1236.0	1258.8	1244.1
30°	1168.0	1164.1	1188.5	1208.9	1220.2
32.5°	1112.5	1126.8	1155.4	1175.6	1164.8
35°	1078.8	1082.0	1107.0	1132.6	1131.9
37.5°	1019.9	1034.7	1069.9	1077.1	1070.5
40°	969.6	984.5	1016.3	1024.0	1020.8
42.5°	932.5	935.1	962.4	971.3	957.2
45°	867.9	884.1	898.8	922.0	900.1
47.5°	812.9	820.5	852.1	858.3	846.8
50°	763.1	765.7	797.5	789.8	782.3
52.5°	700.4	711.5	729.4	727.8	719.0
55°	648.8	644.4	661.4	656.9	656.7
57.5°	586.8	594.4	608.3	601.1	589.7
60°	528.8	529.0	534.1	526.0	524.5
62.5°	464.3	466.5	467.7	457.7	473.9
65°	398.6	393.3	408.7	393.1	395.7
67.5°	338.1	340.8	339.3	329.5	333.2
70°	276.8	280.1	277.7	266.6	270.0
72.5°	220.7	216.5	219.1	205.2	211.6
75°	165.9	162.5	165.5	153.8	159.1
77.5°	113.0	115.6	113.7	107.5	111.1
80°	74.6	72.5	72.5	68.9	69.7
82.5°	43.5	41.4	40.9	39.7	41.4
85°	20.3	19.8	20.1	19.6	18.8
87.5°	7.3	7.5	7.5	7.2	6.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)