

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: P590366

Luminaire Tested: FSR-24-2-LD4-2STD-40-UNV-81-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590366
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-40-UNV-81-85-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3670.0 lumens
Efficiency: N/A
Efficacy: 110.2 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

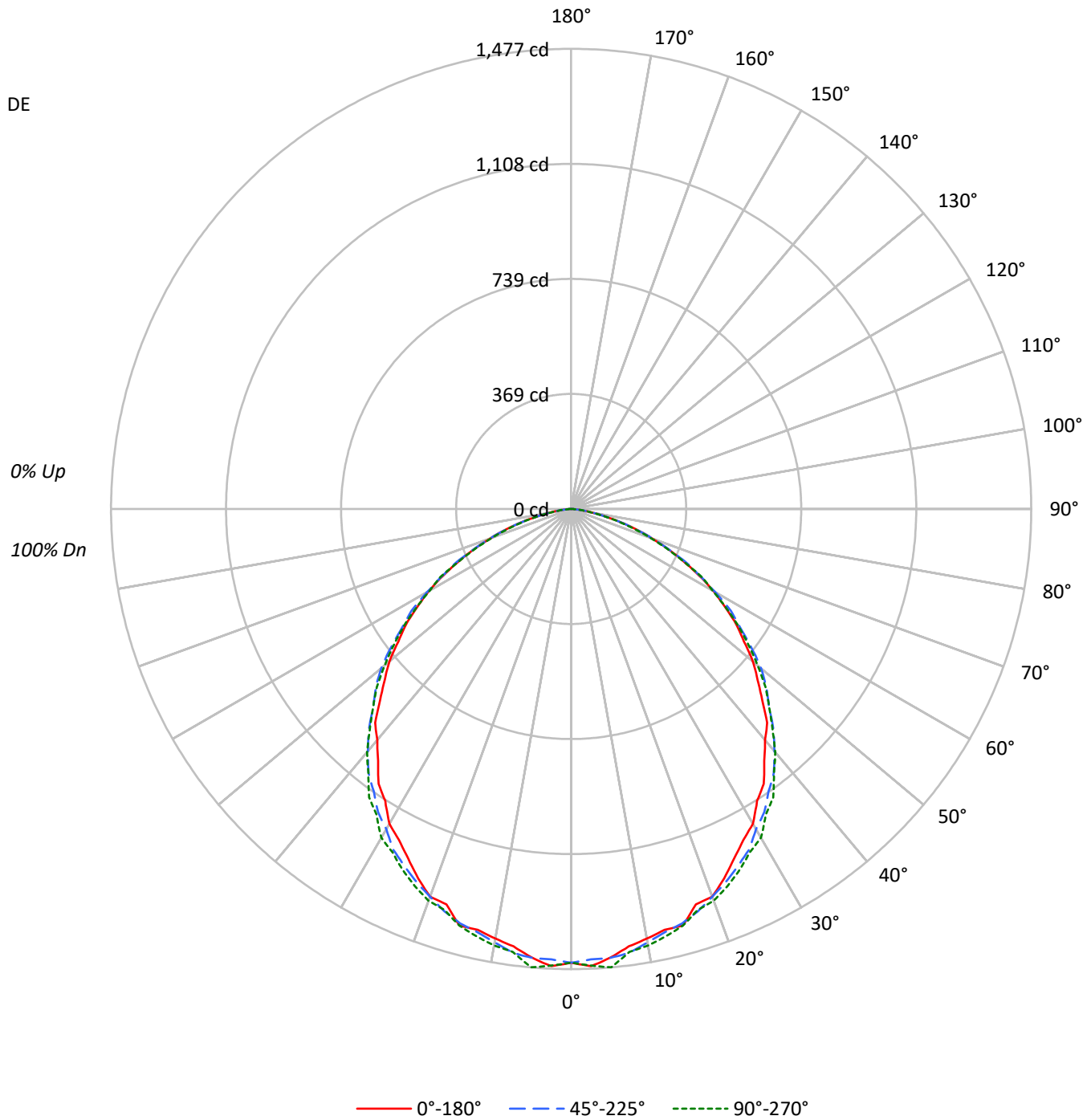
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P590366

CATALOG NUMBER: FSR-24-2-LD4-2STD-40-UNV-81-85-EDD

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	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°	3919	3919	3919
5°	3905	3907	3989
10°	3826	3860	3887
15°	3857	3836	3857
20°	3792	3792	3832
25°	3675	3755	3797
30°	3624	3688	3786
35°	3539	3632	3713
40°	3401	3565	3581
45°	3298	3416	3421
50°	3190	3334	3270
55°	3040	3099	3077
60°	2842	2871	2819
65°	2534	2599	2516
70°	2175	2182	2121
75°	1722	1719	1652
80°	1155	1122	1079
85°	627	621	580

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3504 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.0	3.7
10°-20°	388.2	10.6
20°-30°	581.6	15.8
30°-40°	689.3	18.8
40°-50°	690.6	18.8
50°-60°	586.2	16.0
60°-70°	395.2	10.8
70°-80°	173.7	4.7
80°-90°	28.2	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°	1106.8	30.2
0°-40°	1796.1	48.9
0°-60°	3072.9	83.7
0°-90°	3670.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3670.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1456	1456	1456	1456	1456	
5°	1446	1442	1446	1442	1477	136
15°	1384	1368	1377	1384	1384	386
25°	1238	1244	1265	1281	1279	572
35°	1077	1080	1106	1131	1130	669
45°	867	883	898	921	899	670
55°	648	644	660	656	656	576
65°	398	393	408	393	395	396
75°	166	162	165	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°	1456.2	1456.2	1456.2	1456.2	1456.2
2.5°	1468.8	1457.7	1447.3	1459.4	1466.7
5°	1445.8	1442.4	1446.4	1442.1	1476.8
7.5°	1416.1	1429.1	1436.6	1431.9	1434.0
10°	1400.3	1395.8	1412.5	1424.2	1422.5
12.5°	1383.4	1390.2	1391.1	1403.7	1404.8
15°	1384.3	1368.4	1376.8	1384.0	1384.5
17.5°	1330.6	1347.9	1353.7	1370.1	1349.7
20°	1324.0	1311.4	1324.0	1340.7	1338.1
22.5°	1283.6	1269.5	1296.5	1311.4	1310.5
25°	1237.7	1244.5	1264.8	1281.3	1278.7
27.5°	1197.5	1205.4	1234.3	1257.1	1242.4
30°	1166.4	1162.5	1186.9	1207.2	1218.5
32.5°	1111.0	1125.3	1153.8	1174.0	1163.2
35°	1077.3	1080.5	1105.5	1131.1	1130.3
37.5°	1018.5	1033.3	1068.5	1075.6	1069.0
40°	968.3	983.1	1014.9	1022.6	1019.4
42.5°	931.2	933.9	961.1	970.0	955.9
45°	866.7	882.9	897.6	920.7	898.9
47.5°	811.8	819.4	850.9	857.2	845.7
50°	762.0	764.7	796.4	788.7	781.2
52.5°	699.4	710.5	728.4	726.9	718.0
55°	647.9	643.6	660.5	656.0	655.8
57.5°	586.0	593.6	607.5	600.3	588.9
60°	528.1	528.3	533.4	525.3	523.8
62.5°	463.6	465.9	467.0	457.1	473.2
65°	398.0	392.8	408.2	392.6	395.2
67.5°	337.7	340.3	338.8	329.0	332.8
70°	276.4	279.8	277.3	266.2	269.6
72.5°	220.4	216.2	218.8	204.9	211.3
75°	165.6	162.3	165.3	153.6	158.9
77.5°	112.8	115.4	113.6	107.4	110.9
80°	74.5	72.4	72.4	68.8	69.6
82.5°	43.4	41.4	40.8	39.7	41.4
85°	20.3	19.7	20.1	19.6	18.8
87.5°	7.3	7.5	7.5	7.1	6.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)