

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: P590385

Luminaire Tested: FSR-24-2-LD4-2STD-40-UNV-93-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590385
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-93-88-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3335.0 lumens
Efficiency: N/A
Efficacy: 100.1 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

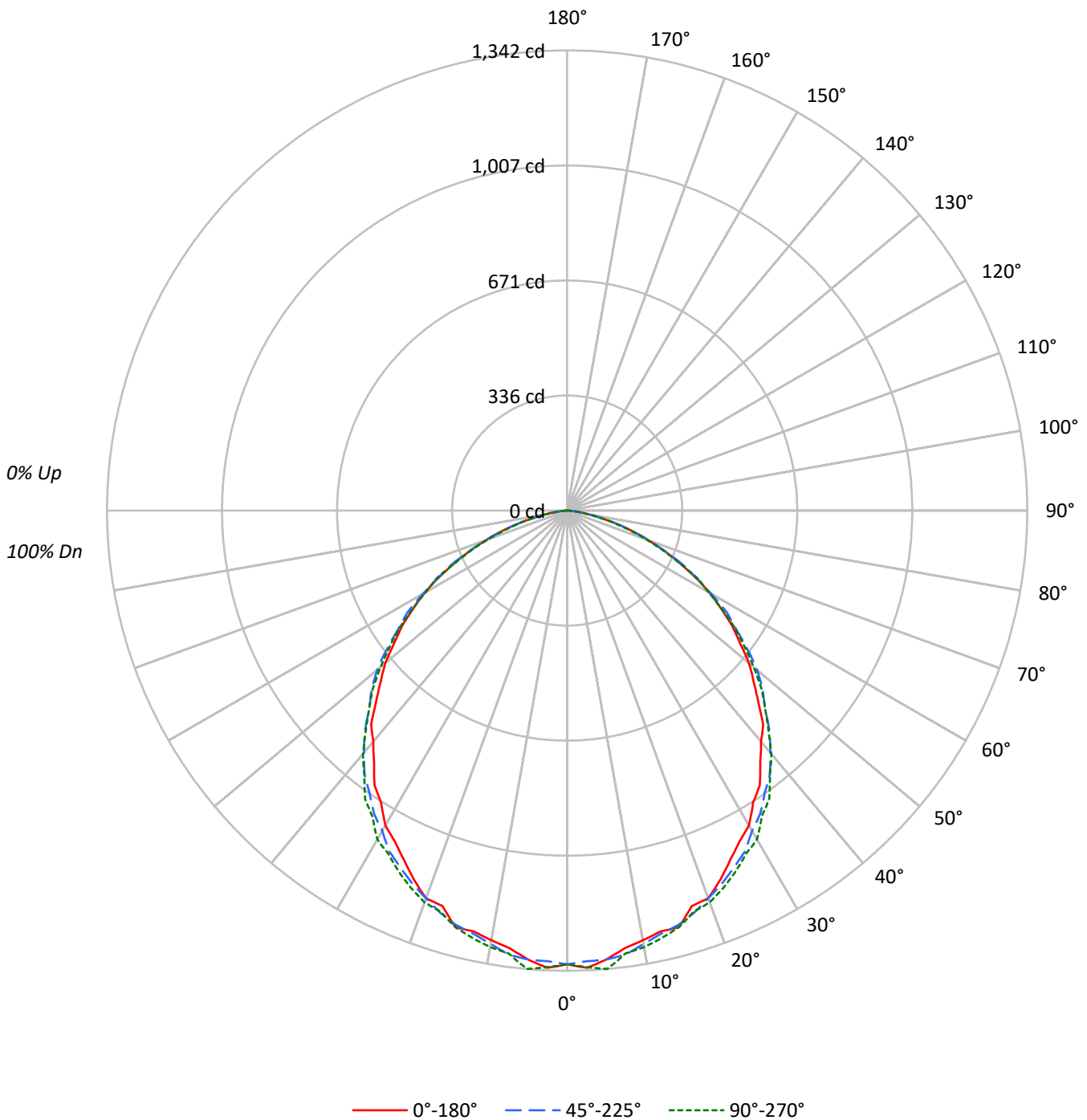
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3561	3561	3561
5°	3549	3551	3625
10°	3477	3507	3532
15°	3505	3485	3505
20°	3445	3445	3482
25°	3339	3412	3450
30°	3294	3352	3441
35°	3216	3300	3374
40°	3091	3240	3254
45°	2997	3104	3108
50°	2899	3030	2972
55°	2762	2816	2796
60°	2583	2609	2562
65°	2303	2362	2287
70°	1976	1983	1928
75°	1565	1562	1501
80°	1049	1020	979
85°	571	565	528

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3184 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.5	3.7
10°-20°	352.8	10.6
20°-30°	528.5	15.8
30°-40°	626.4	18.8
40°-50°	627.6	18.8
50°-60°	532.7	16.0
60°-70°	359.1	10.8
70°-80°	157.8	4.7
80°-90°	25.6	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°	1005.8	30.2
0°-40°	1632.2	48.9
0°-60°	2792.4	83.7
0°-90°	3335.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3335.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1323	1323	1323	1323	1323	
5°	1314	1311	1314	1310	1342	124
15°	1258	1244	1251	1258	1258	350
25°	1125	1131	1149	1164	1162	520
35°	979	982	1005	1028	1027	608
45°	788	802	816	837	817	609
55°	589	585	600	596	596	524
65°	362	357	371	357	359	360
75°	150	147	150	140	144	161
85°	18	18	18	18	17	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1323.2	1323.2	1323.2	1323.2	1323.2
2.5°	1334.7	1324.6	1315.2	1326.1	1332.8
5°	1313.8	1310.8	1314.4	1310.4	1342.0
7.5°	1286.9	1298.6	1305.5	1301.2	1303.1
10°	1272.5	1268.4	1283.6	1294.2	1292.7
12.5°	1257.1	1263.3	1264.1	1275.6	1276.6
15°	1258.0	1243.5	1251.1	1257.6	1258.1
17.5°	1209.1	1224.8	1230.1	1245.0	1226.5
20°	1203.1	1191.7	1203.1	1218.3	1215.9
22.5°	1166.4	1153.6	1178.2	1191.7	1190.8
25°	1124.7	1130.9	1149.3	1164.4	1162.0
27.5°	1088.2	1095.3	1121.6	1142.3	1129.0
30°	1060.0	1056.4	1078.6	1097.0	1107.3
32.5°	1009.6	1022.5	1048.5	1066.8	1057.1
35°	979.0	981.9	1004.6	1027.8	1027.2
37.5°	925.5	939.0	970.9	977.4	971.5
40°	879.9	893.4	922.3	929.3	926.4
42.5°	846.2	848.6	873.4	881.4	868.6
45°	787.6	802.3	815.6	836.7	816.8
47.5°	737.7	744.6	773.3	778.9	768.5
50°	692.5	694.9	723.7	716.7	709.9
52.5°	635.6	645.6	661.9	660.5	652.5
55°	588.8	584.8	600.2	596.1	595.9
57.5°	532.5	539.4	552.0	545.5	535.1
60°	479.9	480.1	484.7	477.4	476.0
62.5°	421.3	423.4	424.4	415.3	430.0
65°	361.7	356.9	370.9	356.7	359.1
67.5°	306.8	309.2	307.9	299.0	302.4
70°	251.2	254.2	252.0	241.9	245.0
72.5°	200.2	196.5	198.9	186.2	192.0
75°	150.5	147.4	150.2	139.6	144.4
77.5°	102.5	104.9	103.2	97.6	100.8
80°	67.7	65.8	65.8	62.5	63.2
82.5°	39.5	37.6	37.1	36.0	37.6
85°	18.5	17.9	18.3	17.8	17.1
87.5°	6.7	6.8	6.8	6.5	6.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)