

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: P590412

Luminaire Tested: FSR-24-2-LD4-2STD-50-UNV-82-97-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590412
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-50-UNV-82-97-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3639.0 lumens
Efficiency: N/A
Efficacy: 109.3 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

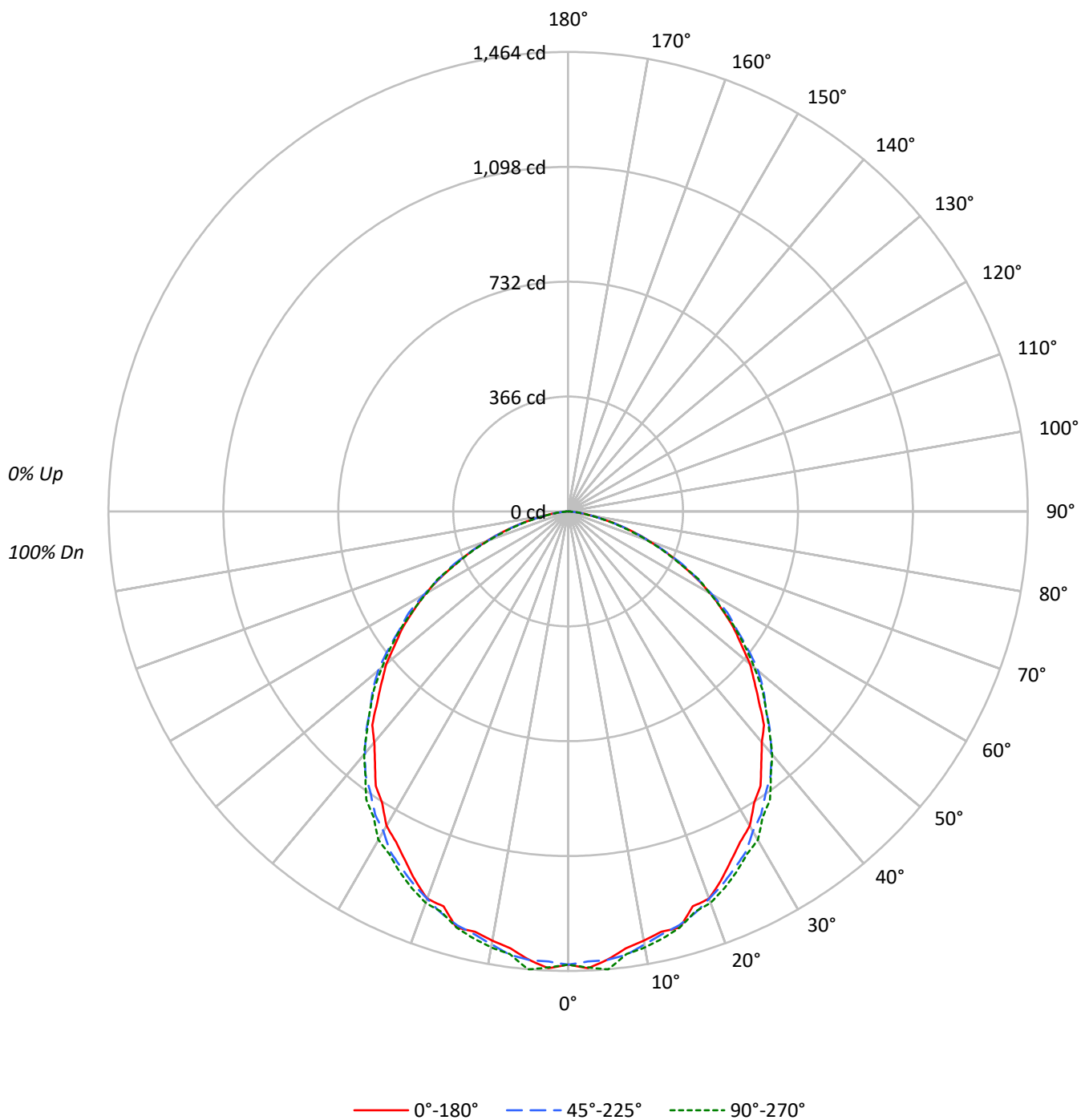
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	3886	3886	3886
5°	3873	3874	3956
10°	3794	3827	3854
15°	3824	3803	3824
20°	3759	3759	3800
25°	3644	3724	3765
30°	3594	3657	3754
35°	3509	3601	3682
40°	3373	3535	3551
45°	3271	3387	3392
50°	3163	3306	3243
55°	3014	3073	3051
60°	2819	2847	2795
65°	2513	2577	2495
70°	2156	2164	2103
75°	1707	1704	1638
80°	1144	1113	1069
85°	621	614	574

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°

Vertical Angle: 45°

Luminance: 3474 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.8	3.7
10°-20°	384.9	10.6
20°-30°	576.7	15.8
30°-40°	683.5	18.8
40°-50°	684.8	18.8
50°-60°	581.2	16.0
60°-70°	391.9	10.8
70°-80°	172.2	4.7
80°-90°	28.0	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°	1097.4	30.2
0°-40°	1780.9	48.9
0°-60°	3047.0	83.7
0°-90°	3639.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3639.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1444	1444	1444	1444	1444	
5°	1434	1430	1434	1430	1464	135
15°	1373	1357	1365	1372	1373	382
25°	1227	1234	1254	1270	1268	567
35°	1068	1071	1096	1122	1121	663
45°	859	876	890	913	891	665
55°	642	638	655	650	650	571
65°	395	389	405	389	392	393
75°	164	161	164	152	158	176
85°	20	20	20	19	19	29
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1443.9	1443.9	1443.9	1443.9	1443.9
2.5°	1456.4	1445.4	1435.1	1447.0	1454.3
5°	1433.6	1430.3	1434.2	1429.9	1464.4
7.5°	1404.2	1417.0	1424.5	1419.8	1421.9
10°	1388.5	1384.0	1400.6	1412.2	1410.5
12.5°	1371.7	1378.4	1379.4	1391.9	1393.0
15°	1372.6	1356.8	1365.2	1372.3	1372.8
17.5°	1319.3	1336.5	1342.3	1358.5	1338.3
20°	1312.8	1300.3	1312.8	1329.4	1326.8
22.5°	1272.7	1258.7	1285.6	1300.3	1299.4
25°	1227.2	1233.9	1254.1	1270.5	1267.9
27.5°	1187.3	1195.2	1223.9	1246.4	1231.9
30°	1156.6	1152.7	1176.9	1197.0	1208.2
32.5°	1101.6	1115.8	1144.1	1164.0	1153.4
35°	1068.2	1071.4	1096.2	1121.5	1120.8
37.5°	1009.9	1024.6	1059.5	1066.5	1060.0
40°	960.1	974.8	1006.3	1014.0	1010.8
42.5°	923.4	926.0	953.0	961.8	947.8
45°	859.4	875.5	890.0	912.9	891.3
47.5°	805.0	812.4	843.8	849.9	838.5
50°	755.6	758.2	789.7	782.1	774.6
52.5°	693.5	704.5	722.2	720.7	712.0
55°	642.4	638.1	654.9	650.4	650.3
57.5°	581.1	588.5	602.3	595.3	583.9
60°	523.7	523.9	528.9	520.9	519.4
62.5°	459.7	462.0	463.1	453.2	469.2
65°	394.7	389.4	404.7	389.3	391.9
67.5°	334.8	337.4	335.9	326.2	330.0
70°	274.0	277.4	275.0	264.0	267.3
72.5°	218.5	214.4	217.0	203.2	209.5
75°	164.2	160.9	163.9	152.3	157.5
77.5°	111.9	114.5	112.6	106.4	110.0
80°	73.8	71.8	71.8	68.2	69.0
82.5°	43.1	41.0	40.5	39.3	41.0
85°	20.1	19.6	19.9	19.4	18.6
87.5°	7.3	7.5	7.5	7.1	6.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)