

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: P590401

Luminaire Tested: FSR-24-2-LD4-2STD-50-UNV-81-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590401
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-81-88-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3215.0 lumens
Efficiency: N/A
Efficacy: 96.5 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

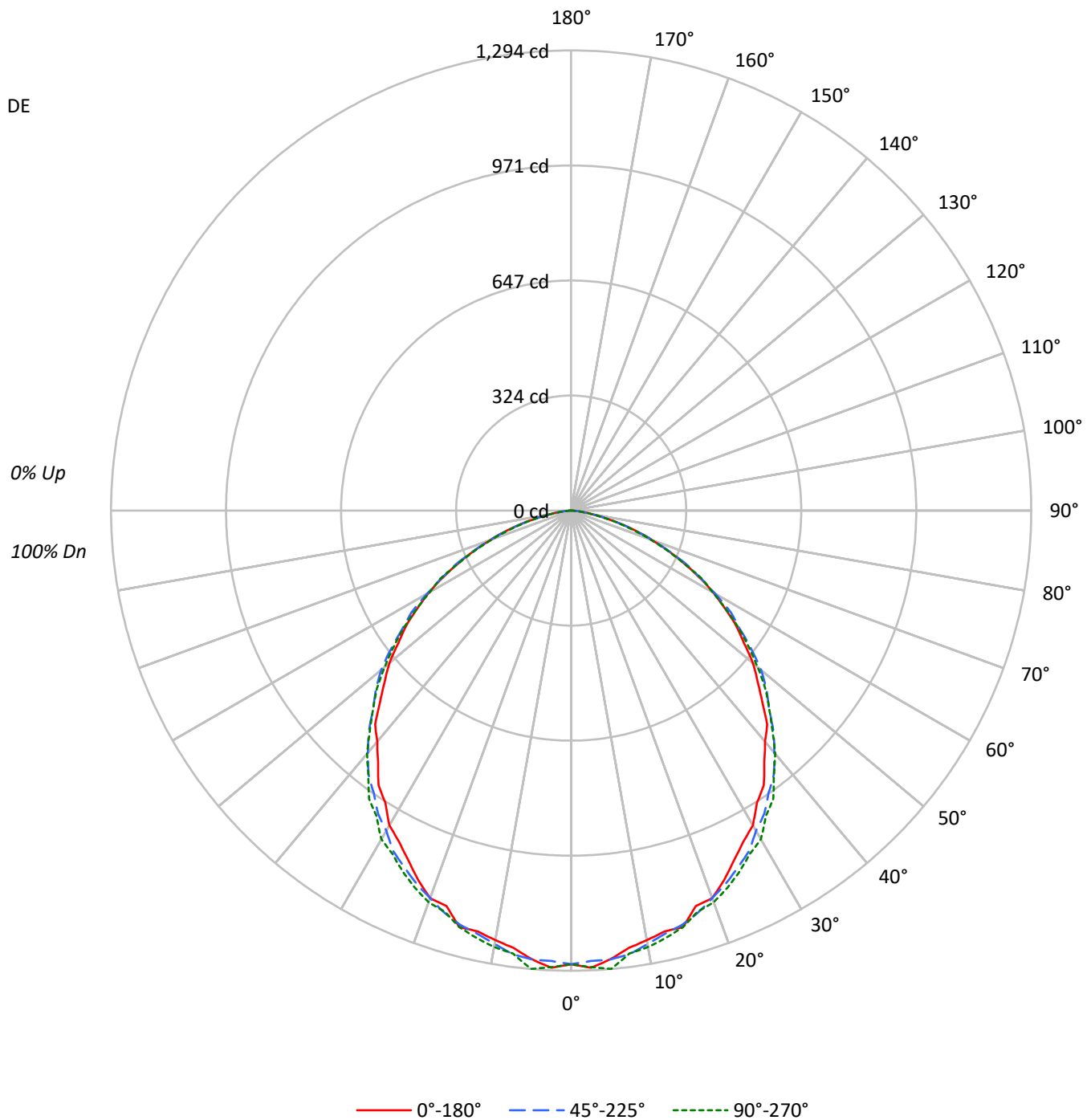
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3433	3433	3433
5°	3421	3423	3495
10°	3352	3381	3405
15°	3378	3360	3379
20°	3321	3321	3357
25°	3219	3290	3326
30°	3175	3231	3317
35°	3100	3182	3253
40°	2980	3123	3137
45°	2890	2992	2997
50°	2794	2921	2865
55°	2663	2715	2695
60°	2490	2515	2470
65°	2220	2277	2204
70°	1905	1911	1858
75°	1509	1506	1447
80°	1010	982	944
85°	550	543	509

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3070 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.0	3.7
10°-20°	340.1	10.6
20°-30°	509.5	15.8
30°-40°	603.9	18.8
40°-50°	605.0	18.8
50°-60°	513.5	16.0
60°-70°	346.2	10.8
70°-80°	152.1	4.7
80°-90°	24.7	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°	969.6	30.2
0°-40°	1573.4	48.9
0°-60°	2692.0	83.7
0°-90°	3215.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3215.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1276	1276	1276	1276	1276	
5°	1267	1264	1267	1263	1294	119
15°	1213	1199	1206	1212	1213	338
25°	1084	1090	1108	1122	1120	501
35°	944	947	968	991	990	586
45°	759	773	786	807	787	587
55°	568	564	579	575	574	505
65°	349	344	358	344	346	347
75°	145	142	145	135	139	155
85°	18	17	18	17	16	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1275.6	1275.6	1275.6	1275.6	1275.6
2.5°	1286.7	1276.9	1267.9	1278.4	1284.9
5°	1266.6	1263.6	1267.1	1263.3	1293.7
7.5°	1240.5	1251.9	1258.5	1254.4	1256.2
10°	1226.7	1222.8	1237.4	1247.6	1246.1
12.5°	1211.9	1217.8	1218.6	1229.7	1230.7
15°	1212.7	1198.7	1206.1	1212.4	1212.9
17.5°	1165.6	1180.8	1185.9	1200.2	1182.4
20°	1159.8	1148.8	1159.8	1174.5	1172.2
22.5°	1124.4	1112.1	1135.8	1148.8	1148.0
25°	1084.2	1090.2	1108.0	1122.5	1120.2
27.5°	1049.0	1055.9	1081.3	1101.2	1088.4
30°	1021.8	1018.4	1039.8	1057.6	1067.4
32.5°	973.2	985.8	1010.8	1028.4	1019.0
35°	943.8	946.6	968.5	990.9	990.2
37.5°	892.2	905.2	936.0	942.3	936.5
40°	848.2	861.2	889.1	895.8	893.0
42.5°	815.8	818.1	842.0	849.7	837.4
45°	759.3	773.4	786.3	806.6	787.4
47.5°	711.2	717.8	745.4	750.9	740.8
50°	667.5	669.9	697.7	690.9	684.3
52.5°	612.7	622.4	638.1	636.7	629.0
55°	567.6	563.8	578.6	574.7	574.5
57.5°	513.4	520.0	532.2	525.9	515.9
60°	462.7	462.8	467.3	460.2	458.9
62.5°	406.2	408.1	409.1	400.4	414.6
65°	348.7	344.1	357.6	343.9	346.2
67.5°	295.8	298.1	296.8	288.2	291.5
70°	242.1	245.1	242.9	233.2	236.2
72.5°	193.0	189.4	191.7	179.5	185.1
75°	145.1	142.1	144.8	134.6	139.2
77.5°	98.8	101.1	99.5	94.0	97.2
80°	65.2	63.4	63.4	60.3	60.9
82.5°	38.0	36.2	35.7	34.8	36.2
85°	17.8	17.3	17.6	17.1	16.5
87.5°	6.4	6.6	6.6	6.3	5.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)