

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: P562252

Luminaire Tested: FSR-24-4-LD4-1LO-50-UNV-81-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562252
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-4-LD4-1LO-50-UNV-81-96-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2452.0 lumens
Efficiency: N/A
Efficacy: 104.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

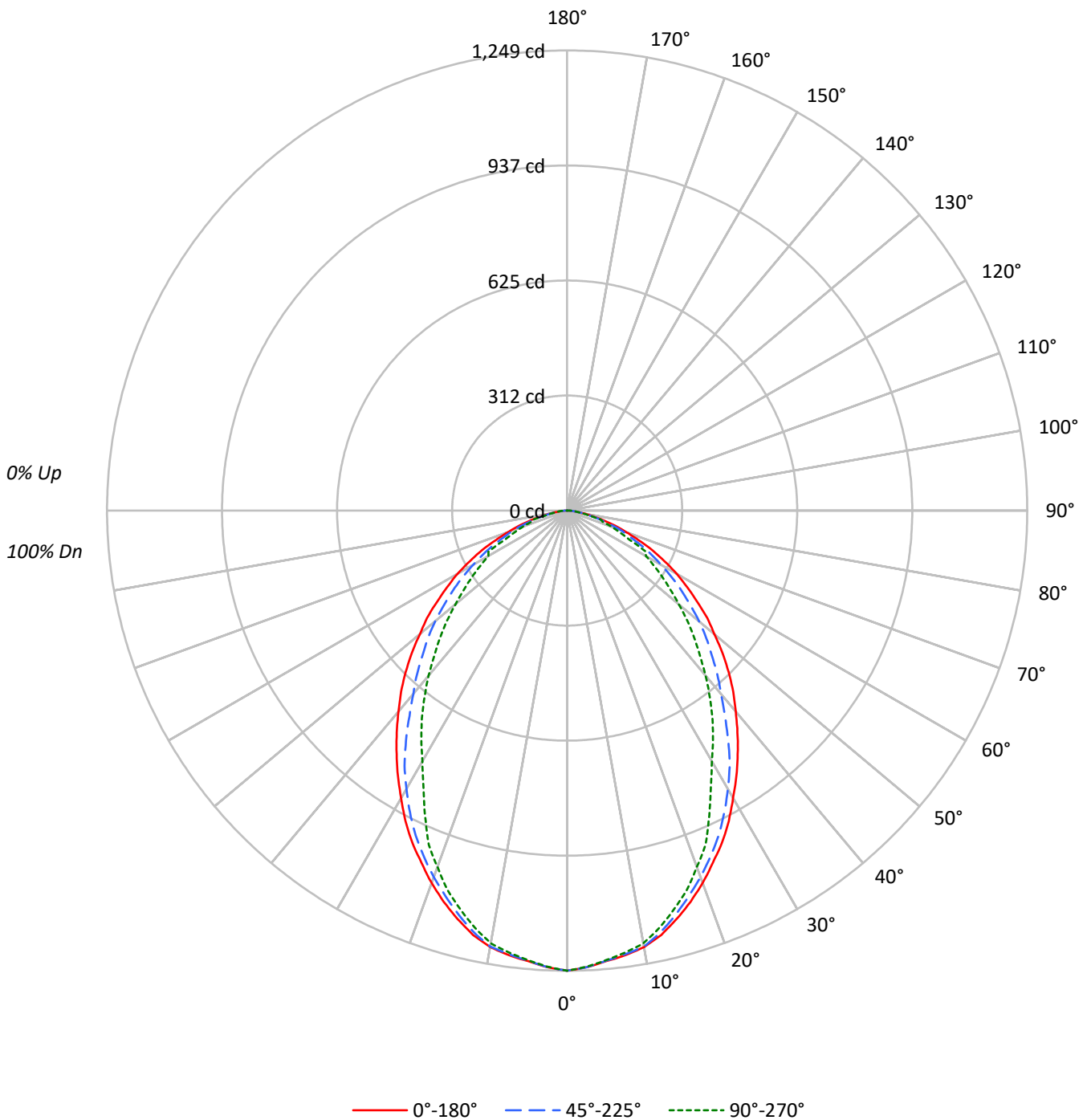
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87					87			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75					75			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65					65			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56					56			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50					50			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44					44			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40					40			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36					36			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33					33			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30					30			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1681	1681	1681
5°	1658	1656	1654
10°	1643	1641	1630
15°	1599	1583	1561
20°	1540	1515	1474
25°	1477	1445	1355
30°	1400	1355	1220
35°	1326	1252	1129
40°	1250	1141	1027
45°	1179	1055	929
50°	1091	979	828
55°	1009	887	742
60°	925	793	664
65°	814	694	588
70°	670	608	500
75°	533	465	488
80°	358	336	313
85°	222	267	312

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1179 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.3	4.7
10°-20°	319.1	13.0
20°-30°	441.7	18.0
30°-40°	471.0	19.2
40°-50°	429.7	17.5
50°-60°	336.7	13.7
60°-70°	219.4	8.9
70°-80°	97.2	4.0
80°-90°	20.9	0.9
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°	877.1	35.8
0°-40°	1348.1	55.0
0°-60°	2114.5	86.2
0°-90°	2452.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2452.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1249	1249	1249	1249	1249	
5°	1227	1226	1226	1224	1224	117
15°	1148	1148	1136	1125	1120	323
25°	995	989	973	939	913	457
35°	807	801	762	705	687	505
45°	620	606	554	508	488	477
55°	430	417	378	334	316	386
65°	256	241	218	222	185	252
75°	102	95	90	85	94	110
85°	14	16	17	19	20	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1249.0	1249.0	1249.0	1249.0	1249.0
2.5°	1240.4	1240.4	1240.4	1238.9	1238.9
5°	1227.4	1225.9	1225.9	1224.5	1224.5
7.5°	1217.2	1215.8	1214.4	1212.9	1210.0
10°	1202.8	1202.8	1201.4	1194.1	1192.7
12.5°	1179.7	1178.3	1172.5	1162.4	1159.5
15°	1147.9	1147.9	1136.4	1124.8	1120.5
17.5°	1113.3	1111.8	1097.4	1085.8	1080.1
20°	1075.7	1072.9	1058.4	1039.6	1029.5
22.5°	1033.9	1033.9	1016.5	992.0	981.9
25°	994.9	989.1	973.2	938.6	912.6
27.5°	950.1	941.5	924.1	875.0	844.7
30°	901.0	896.7	872.1	808.6	785.5
32.5°	854.8	847.6	821.6	755.2	736.4
35°	807.2	801.4	762.4	704.6	687.3
37.5°	759.5	752.3	703.2	657.0	635.3
40°	711.9	703.2	649.8	607.9	584.8
42.5°	667.1	655.6	603.6	558.8	532.8
45°	619.5	606.5	554.5	508.3	488.1
47.5°	571.8	560.3	512.6	465.0	441.8
50°	521.3	511.2	467.8	420.2	395.6
52.5°	479.4	463.5	421.6	374.0	353.8
55°	430.3	417.3	378.3	333.6	316.2
57.5°	385.5	372.5	336.4	294.6	280.1
60°	343.7	324.9	294.6	258.5	246.9
62.5°	297.5	283.0	257.0	226.7	241.1
65°	255.6	241.1	218.0	222.4	184.8
67.5°	209.4	202.2	181.9	161.7	155.9
70°	170.4	161.7	154.5	132.8	127.1
72.5°	135.7	127.1	117.0	105.4	101.1
75°	102.5	95.3	89.5	85.2	93.9
77.5°	70.8	67.9	63.5	59.2	57.8
80°	46.2	44.8	43.3	41.9	40.4
82.5°	27.4	27.4	27.4	27.4	27.4
85°	14.4	15.9	17.3	18.8	20.2
87.5°	8.7	8.7	10.1	11.6	13.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)