

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: P562286

Luminaire Tested: FSR-24-4-LD4-1LO-50-UNV-93-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562286
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-93-97-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2494.0 lumens
Efficiency: N/A
Efficacy: 106.6 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

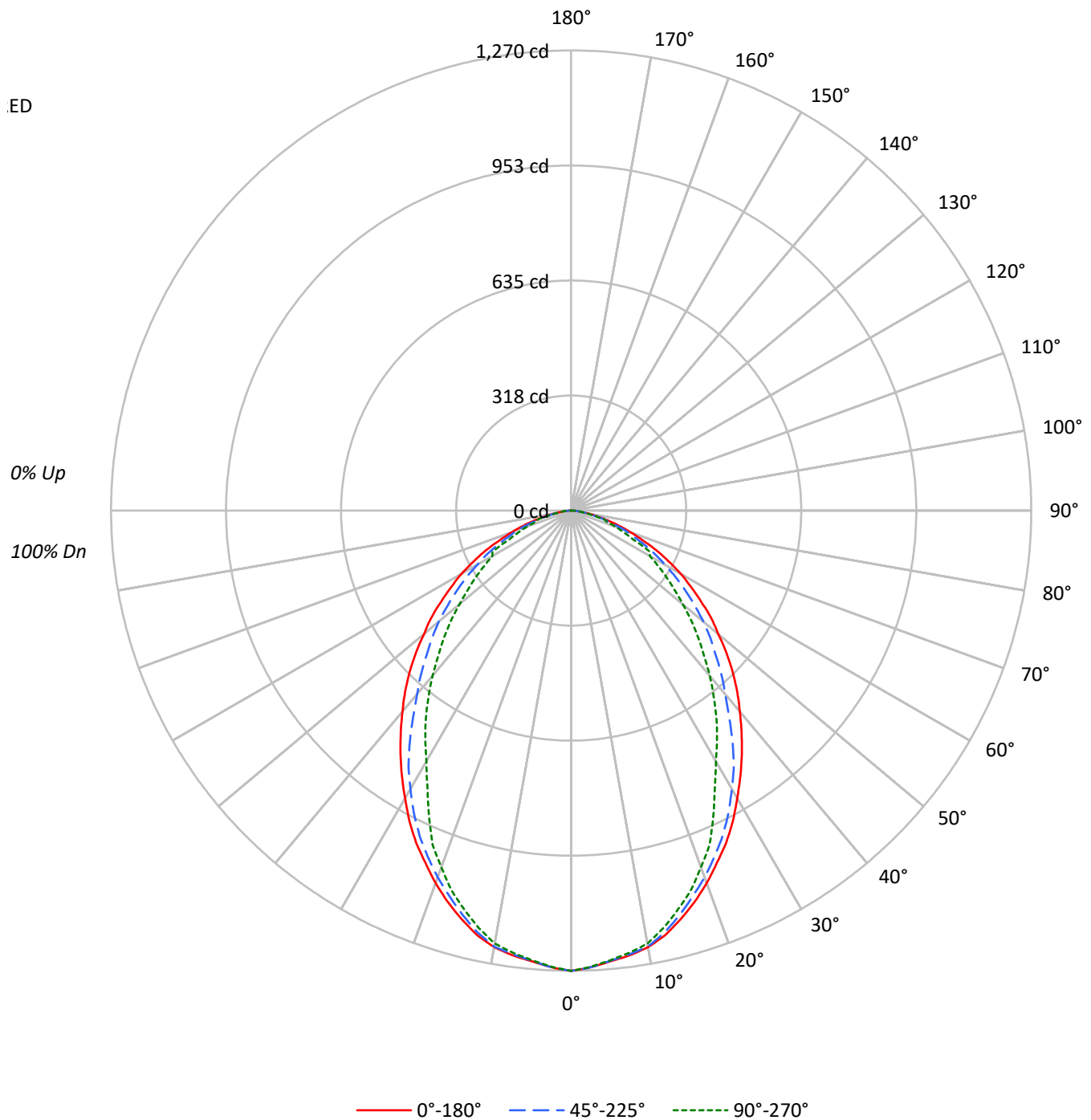
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	1709	1709	1709
5°	1686	1684	1682
10°	1671	1669	1657
15°	1626	1610	1588
20°	1567	1541	1499
25°	1502	1470	1378
30°	1424	1378	1241
35°	1349	1274	1148
40°	1272	1161	1045
45°	1199	1073	945
50°	1110	996	842
55°	1027	903	754
60°	940	806	676
65°	828	706	599
70°	682	618	508
75°	542	474	496
80°	364	342	318
85°	227	272	318

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1199 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.3	4.7
10°-20°	324.5	13.0
20°-30°	449.3	18.0
30°-40°	479.1	19.2
40°-50°	437.1	17.5
50°-60°	342.4	13.7
60°-70°	223.2	8.9
70°-80°	98.9	4.0
80°-90°	21.2	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°	892.1	35.8
0°-40°	1371.2	55.0
0°-60°	2150.7	86.2
0°-90°	2494.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2494.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1270	1270	1270	1270	1270	
5°	1248	1247	1247	1245	1245	119
15°	1168	1168	1156	1144	1140	328
25°	1012	1006	990	955	928	465
35°	821	815	776	717	699	513
45°	630	617	564	517	496	485
55°	438	424	385	339	322	393
65°	260	245	222	226	188	256
75°	104	97	91	87	96	112
85°	15	16	18	19	21	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1270.4	1270.4	1270.4	1270.4	1270.4
2.5°	1261.6	1261.6	1261.6	1260.1	1260.1
5°	1248.4	1246.9	1246.9	1245.4	1245.4
7.5°	1238.1	1236.6	1235.2	1233.7	1230.8
10°	1223.4	1223.4	1221.9	1214.6	1213.1
12.5°	1199.9	1198.4	1192.6	1182.3	1179.4
15°	1167.6	1167.6	1155.9	1144.1	1139.7
17.5°	1132.4	1130.9	1116.2	1104.4	1098.6
20°	1094.2	1091.2	1076.5	1057.5	1047.2
22.5°	1051.6	1051.6	1034.0	1009.0	998.7
25°	1011.9	1006.0	989.9	954.6	928.2
27.5°	966.4	957.6	940.0	890.0	859.2
30°	916.5	912.1	887.1	822.5	799.0
32.5°	869.5	862.1	835.7	768.1	749.0
35°	821.0	815.1	775.5	716.7	699.1
37.5°	772.5	765.2	715.2	668.3	646.2
40°	724.1	715.2	660.9	618.3	594.8
42.5°	678.5	666.8	613.9	568.4	541.9
45°	630.1	616.8	564.0	517.0	496.4
47.5°	581.6	569.8	521.4	472.9	449.4
50°	530.2	519.9	475.9	427.4	402.4
52.5°	487.6	471.4	428.9	380.4	359.8
55°	437.7	424.4	384.8	339.3	321.6
57.5°	392.1	378.9	342.2	299.6	284.9
60°	349.5	330.5	299.6	262.9	251.1
62.5°	302.5	287.9	261.4	230.6	245.3
65°	260.0	245.3	221.8	226.2	188.0
67.5°	213.0	205.6	185.1	164.5	158.6
70°	173.3	164.5	157.1	135.1	129.2
72.5°	138.1	129.2	119.0	107.2	102.8
75°	104.3	96.9	91.1	86.7	95.5
77.5°	72.0	69.0	64.6	60.2	58.7
80°	47.0	45.5	44.1	42.6	41.1
82.5°	27.9	27.9	27.9	27.9	27.9
85°	14.7	16.2	17.6	19.1	20.6
87.5°	8.8	8.8	10.3	11.7	13.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)