

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: P562276

Luminaire Tested: FSR-24-4-LD4-1LO-50-UNV-93-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562276
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-93-86-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2529.0 lumens
Efficiency: N/A
Efficacy: 108.1 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

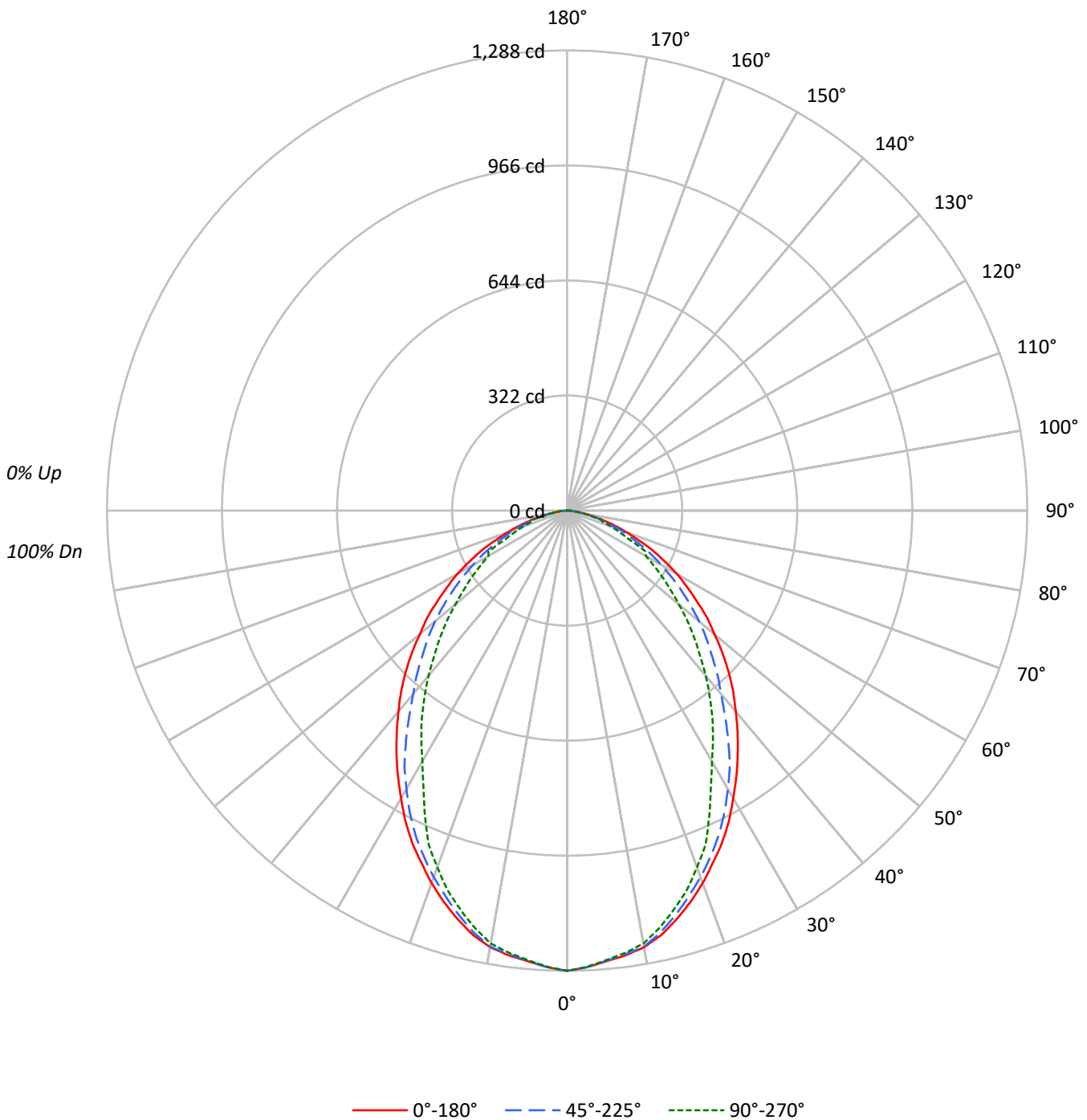
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	1733	1733	1733
5°	1710	1708	1706
10°	1695	1693	1681
15°	1649	1633	1610
20°	1589	1563	1520
25°	1523	1490	1397
30°	1444	1397	1259
35°	1367	1292	1164
40°	1290	1177	1059
45°	1216	1088	958
50°	1125	1010	854
55°	1041	915	765
60°	954	818	685
65°	839	716	607
70°	691	627	516
75°	549	480	503
80°	370	346	323
85°	230	276	323

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1216 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.9	4.7
10°-20°	329.1	13.0
20°-30°	455.6	18.0
30°-40°	485.8	19.2
40°-50°	443.2	17.5
50°-60°	347.2	13.7
60°-70°	226.3	8.9
70°-80°	100.3	4.0
80°-90°	21.5	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°	904.6	35.8
0°-40°	1390.5	55.0
0°-60°	2180.9	86.2
0°-90°	2529.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2529.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1288	1288	1288	1288	1288	
5°	1266	1264	1264	1263	1263	120
15°	1184	1184	1172	1160	1156	333
25°	1026	1020	1004	968	941	471
35°	832	827	786	727	709	520
45°	639	626	572	524	503	492
55°	444	430	390	344	326	398
65°	264	249	225	229	191	260
75°	106	98	92	88	97	113
85°	15	16	18	19	21	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1288.2	1288.2	1288.2	1288.2	1288.2
2.5°	1279.3	1279.3	1279.3	1277.8	1277.8
5°	1265.9	1264.4	1264.4	1262.9	1262.9
7.5°	1255.5	1254.0	1252.5	1251.0	1248.0
10°	1240.6	1240.6	1239.1	1231.6	1230.2
12.5°	1216.8	1215.3	1209.3	1198.9	1195.9
15°	1184.0	1184.0	1172.1	1160.2	1155.7
17.5°	1148.2	1146.8	1131.9	1119.9	1114.0
20°	1109.5	1106.5	1091.7	1072.3	1061.9
22.5°	1066.3	1066.3	1048.5	1023.1	1012.7
25°	1026.1	1020.2	1003.8	968.0	941.2
27.5°	980.0	971.0	953.1	902.5	871.2
30°	929.3	924.9	899.5	834.0	810.2
32.5°	881.7	874.2	847.4	778.9	759.5
35°	832.5	826.6	786.3	726.8	708.9
37.5°	783.4	775.9	725.3	677.6	655.3
40°	734.2	725.3	670.2	627.0	603.2
42.5°	688.1	676.1	622.5	576.4	549.5
45°	638.9	625.5	571.9	524.2	503.4
47.5°	589.8	577.8	528.7	479.6	455.7
50°	537.6	527.2	482.5	433.4	408.1
52.5°	494.4	478.1	434.9	385.7	364.9
55°	443.8	430.4	390.2	344.0	326.2
57.5°	397.6	384.2	347.0	303.8	288.9
60°	354.5	335.1	303.8	266.6	254.7
62.5°	306.8	291.9	265.1	233.8	248.7
65°	263.6	248.7	224.9	229.4	190.6
67.5°	215.9	208.5	187.7	166.8	160.8
70°	175.7	166.8	159.4	137.0	131.1
72.5°	140.0	131.1	120.6	108.7	104.3
75°	105.7	98.3	92.3	87.9	96.8
77.5°	73.0	70.0	65.5	61.1	59.6
80°	47.7	46.2	44.7	43.2	41.7
82.5°	28.3	28.3	28.3	28.3	28.3
85°	14.9	16.4	17.9	19.4	20.9
87.5°	8.9	8.9	10.4	11.9	13.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)