

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: P560557

Luminaire Tested: FSR-12-2-LD4-2LO-50-UNV-93-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560557
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-12-2-LD4-2LO-50-UNV-93-96-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2324.0 lumens
Efficiency: N/A
Efficacy: 99.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

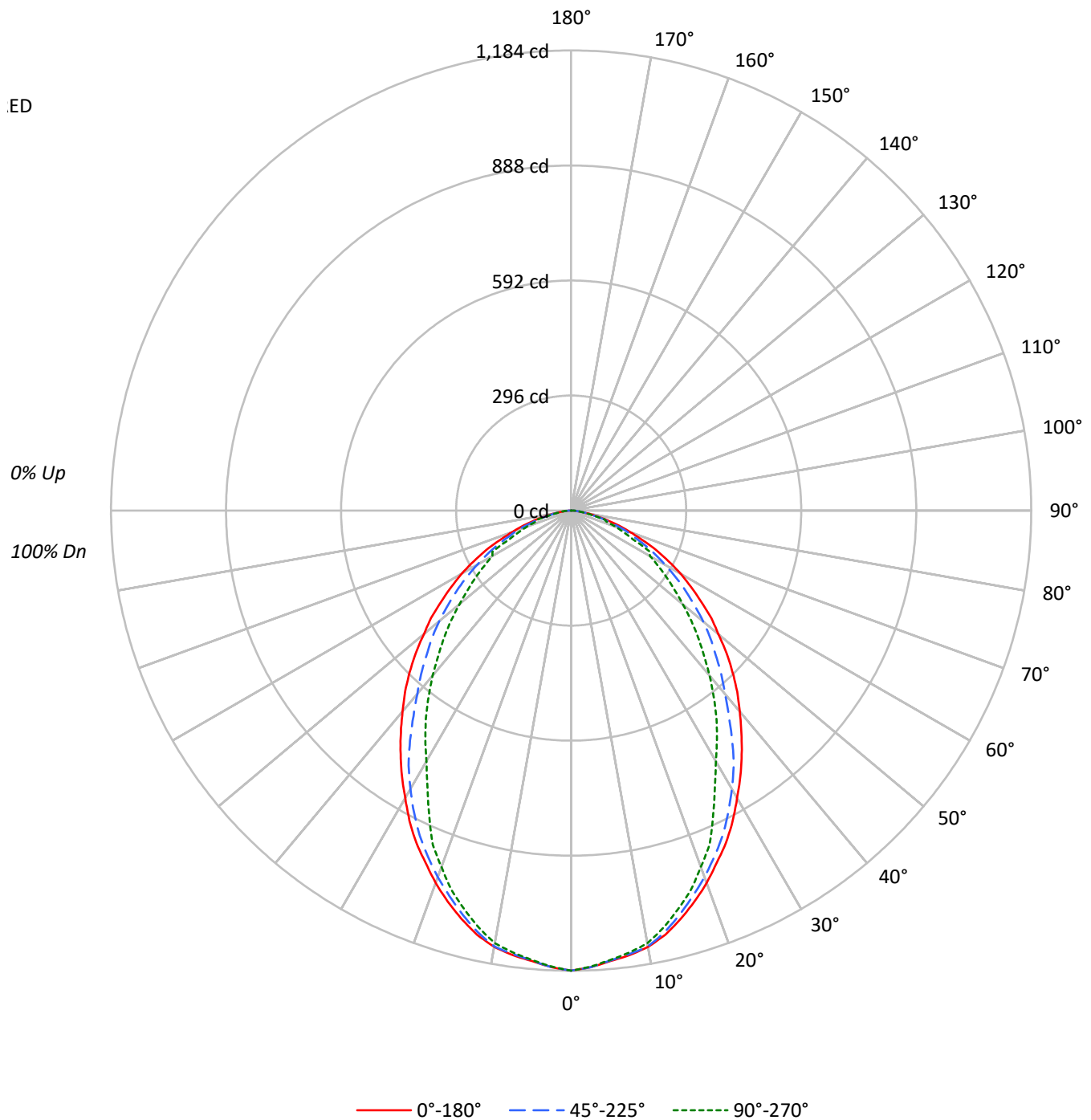
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6371	6371	6371
5°	6285	6277	6270
10°	6230	6223	6178
15°	6062	6001	5917
20°	5840	5746	5589
25°	5599	5478	5136
30°	5307	5137	4627
35°	5026	4748	4280
40°	4740	4327	3894
45°	4469	4000	3521
50°	4137	3713	3140
55°	3826	3365	2812
60°	3506	3005	2519
65°	3084	2632	2231
70°	2541	2304	1895
75°	2021	1765	1851
80°	1358	1274	1187
85°	846	1013	1186

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4469 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.2	4.7
10°-20°	302.4	13.0
20°-30°	418.7	18.0
30°-40°	446.5	19.2
40°-50°	407.3	17.5
50°-60°	319.1	13.7
60°-70°	208.0	8.9
70°-80°	92.1	4.0
80°-90°	19.8	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°	831.3	35.8
0°-40°	1277.8	55.0
0°-60°	2004.1	86.2
0°-90°	2324.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2324.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1184	1184	1184	1184	1184	
5°	1163	1162	1162	1160	1160	110
15°	1088	1088	1077	1066	1062	306
25°	943	938	922	890	865	433
35°	765	760	723	668	651	478
45°	587	575	526	482	463	452
55°	408	396	359	316	300	366
65°	242	229	207	211	175	239
75°	97	90	85	81	89	104
85°	14	15	16	18	19	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	<i>1183.8</i>	<i>1183.8</i>	<i>1183.8</i>	<i>1183.8</i>	<i>1183.8</i>
2.5°	<i>1175.6</i>	1175.6	1175.6	1174.2	1174.2
5°	<i>1163.3</i>	1161.9	1161.9	1160.5	1160.5
7.5°	<i>1153.7</i>	1152.3	1151.0	1149.6	1146.9
10°	<i>1140.0</i>	1140.0	1138.7	1131.8	1130.4
12.5°	<i>1118.1</i>	1116.8	1111.3	1101.7	1099.0
15°	<i>1088.0</i>	1088.0	1077.1	1066.1	1062.0
17.5°	<i>1055.2</i>	1053.8	1040.1	1029.2	1023.7
20°	<i>1019.6</i>	1016.8	1003.2	985.4	975.8
22.5°	<i>979.9</i>	979.9	963.5	940.2	930.6
25°	<i>942.9</i>	937.5	922.4	889.6	864.9
27.5°	<i>900.5</i>	892.3	875.9	829.4	800.6
30°	<i>854.0</i>	849.9	826.6	766.4	744.5
32.5°	<i>810.2</i>	803.4	778.7	715.8	698.0
35°	<i>765.0</i>	759.6	722.6	667.9	651.4
37.5°	<i>719.9</i>	713.0	666.5	622.7	602.2
40°	<i>674.7</i>	666.5	615.9	576.2	554.3
42.5°	<i>632.3</i>	621.3	572.1	529.6	505.0
45°	<i>587.1</i>	574.8	525.5	481.7	462.6
47.5°	<i>542.0</i>	531.0	485.8	440.7	418.8
50°	<i>494.1</i>	484.5	443.4	398.3	375.0
52.5°	<i>454.4</i>	439.3	399.6	354.5	335.3
55°	<i>407.8</i>	395.5	358.6	316.1	299.7
57.5°	<i>365.4</i>	353.1	318.9	279.2	265.5
60°	<i>325.7</i>	307.9	279.2	245.0	234.0
62.5°	<i>281.9</i>	268.2	243.6	214.9	228.6
65°	<i>242.2</i>	228.6	206.7	210.8	175.2
67.5°	<i>198.4</i>	191.6	172.4	153.3	147.8
70°	<i>161.5</i>	153.3	146.4	125.9	120.4
72.5°	<i>128.6</i>	120.4	110.9	99.9	95.8
75°	<i>97.2</i>	90.3	84.9	80.7	89.0
77.5°	<i>67.1</i>	64.3	60.2	56.1	54.7
80°	<i>43.8</i>	42.4	41.1	39.7	38.3
82.5°	<i>26.0</i>	26.0	26.0	26.0	26.0
85°	<i>13.7</i>	15.1	16.4	17.8	19.2
87.5°	<i>8.2</i>	8.2	9.6	10.9	12.3
90°	<i>0.0</i>	0.0	0.0	0.0	0.0

(END OF REPORT)