

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: P560421

Luminaire Tested: FSR-12-2-LD4-2LO-35-UNV-93-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560421
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-35-UNV-93-86-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2212.0 lumens
Efficiency: N/A
Efficacy: 94.5 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

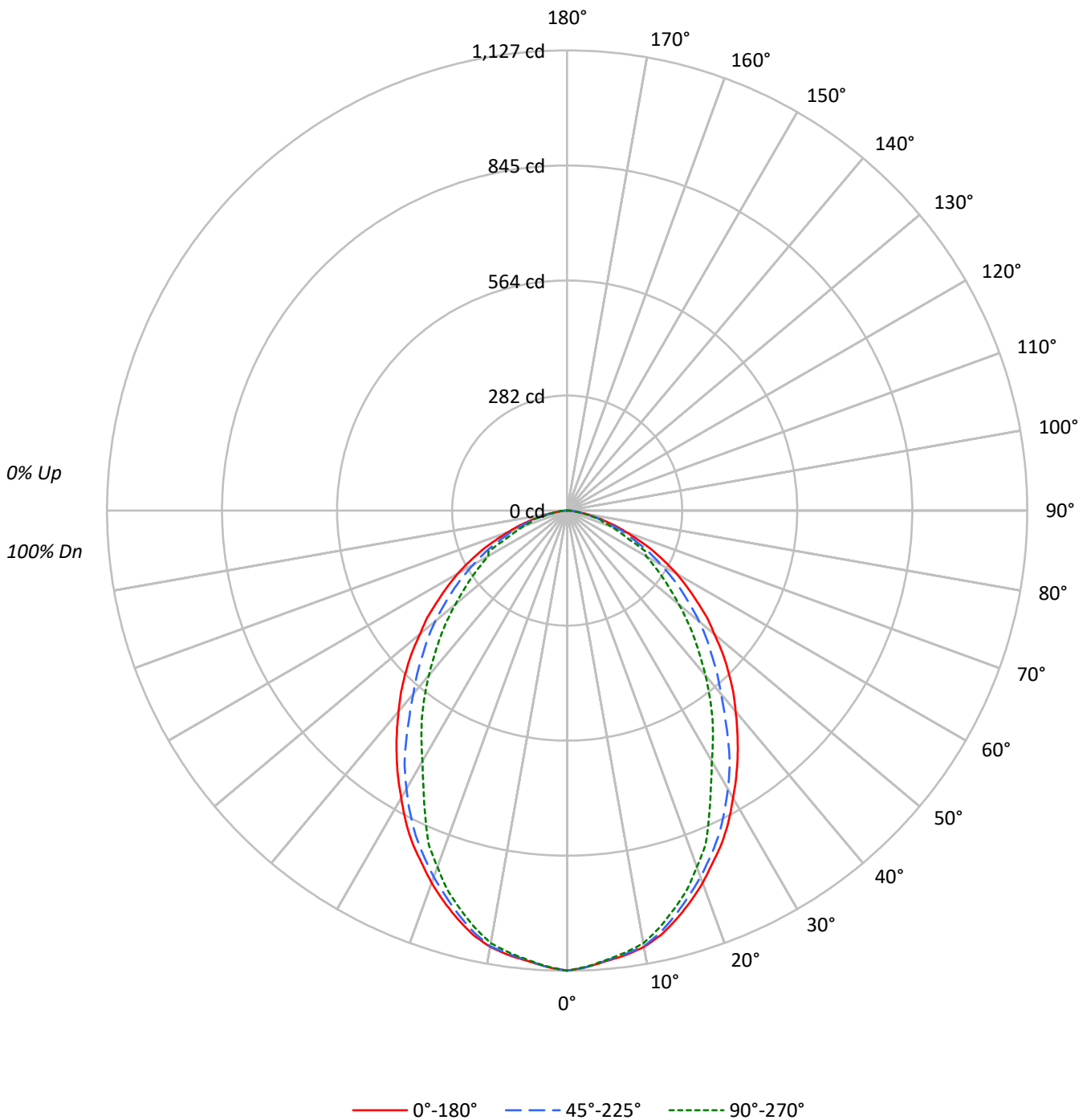
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6064	6064	6064
5°	5982	5975	5968
10°	5930	5923	5880
15°	5770	5712	5632
20°	5558	5468	5320
25°	5330	5214	4889
30°	5051	4890	4404
35°	4784	4519	4073
40°	4512	4118	3707
45°	4253	3807	3351
50°	3937	3533	2988
55°	3643	3202	2677
60°	3337	2860	2397
65°	2937	2505	2123
70°	2419	2194	1803
75°	1923	1680	1761
80°	1292	1212	1131
85°	803	963	1124

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4253 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.9	4.7
10°-20°	287.9	13.0
20°-30°	398.5	18.0
30°-40°	424.9	19.2
40°-50°	387.7	17.5
50°-60°	303.7	13.7
60°-70°	197.9	8.9
70°-80°	87.7	4.0
80°-90°	18.8	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°	791.3	35.8
0°-40°	1216.2	55.0
0°-60°	1907.5	86.2
0°-90°	2212.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2212.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1127	1127	1127	1127	1127	
5°	1107	1106	1106	1105	1105	105
15°	1036	1036	1025	1015	1011	291
25°	898	892	878	847	823	412
35°	728	723	688	636	620	455
45°	559	547	500	458	440	430
55°	388	376	341	301	285	348
65°	231	218	197	201	167	227
75°	92	86	81	77	85	99
85°	13	14	16	17	18	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	<i>1126.8</i>	<i>1126.8</i>	<i>1126.8</i>	<i>1126.8</i>	<i>1126.8</i>
2.5°	<i>1118.9</i>	1118.9	1118.9	1117.6	1117.6
5°	<i>1107.2</i>	1105.9	1105.9	1104.6	1104.6
7.5°	<i>1098.1</i>	1096.8	1095.5	1094.2	1091.6
10°	<i>1085.1</i>	1085.1	1083.8	1077.3	1076.0
12.5°	<i>1064.2</i>	1062.9	1057.7	1048.6	1046.0
15°	<i>1035.6</i>	1035.6	1025.2	1014.7	1010.8
17.5°	<i>1004.3</i>	1003.0	990.0	979.6	974.4
20°	<i>970.4</i>	967.8	954.8	937.9	928.8
22.5°	<i>932.7</i>	932.7	917.0	894.9	885.8
25°	<i>897.5</i>	892.3	878.0	846.7	823.3
27.5°	<i>857.1</i>	849.3	833.7	789.4	762.0
30°	<i>812.8</i>	808.9	786.8	729.5	708.6
32.5°	<i>771.1</i>	764.6	741.2	681.3	664.3
35°	<i>728.2</i>	723.0	687.8	635.7	620.0
37.5°	<i>685.2</i>	678.7	634.4	592.7	573.2
40°	<i>642.2</i>	634.4	586.2	548.4	527.6
42.5°	<i>601.8</i>	591.4	544.5	504.1	480.7
45°	<i>558.8</i>	547.1	500.2	458.5	440.3
47.5°	<i>515.8</i>	505.4	462.4	419.4	398.6
50°	<i>470.2</i>	461.1	422.0	379.1	356.9
52.5°	<i>432.5</i>	418.1	380.4	337.4	319.1
55°	<i>388.2</i>	376.5	341.3	300.9	285.3
57.5°	<i>347.8</i>	336.1	303.5	265.7	252.7
60°	<i>310.0</i>	293.1	265.7	233.2	222.7
62.5°	<i>268.3</i>	255.3	231.9	204.5	217.5
65°	<i>230.6</i>	217.5	196.7	200.6	166.7
67.5°	<i>188.9</i>	182.4	164.1	145.9	140.7
70°	<i>153.7</i>	145.9	139.4	119.8	114.6
72.5°	<i>122.4</i>	114.6	105.5	95.1	91.2
75°	<i>92.5</i>	86.0	80.8	76.9	84.7
77.5°	<i>63.8</i>	61.2	57.3	53.4	52.1
80°	<i>41.7</i>	40.4	39.1	37.8	36.5
82.5°	<i>24.7</i>	24.7	24.7	24.7	24.7
85°	<i>13.0</i>	14.3	15.6	16.9	18.2
87.5°	<i>7.8</i>	7.8	9.1	10.4	11.7
90°	<i>0.0</i>	0.0	0.0	0.0	0.0

(END OF REPORT)