

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: P559343

Luminaire Tested: FSR-12-1-LD4-2LO-40-UNV-93-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559343
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-12-1-LD4-2LO-40-UNV-93-97-EDD
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

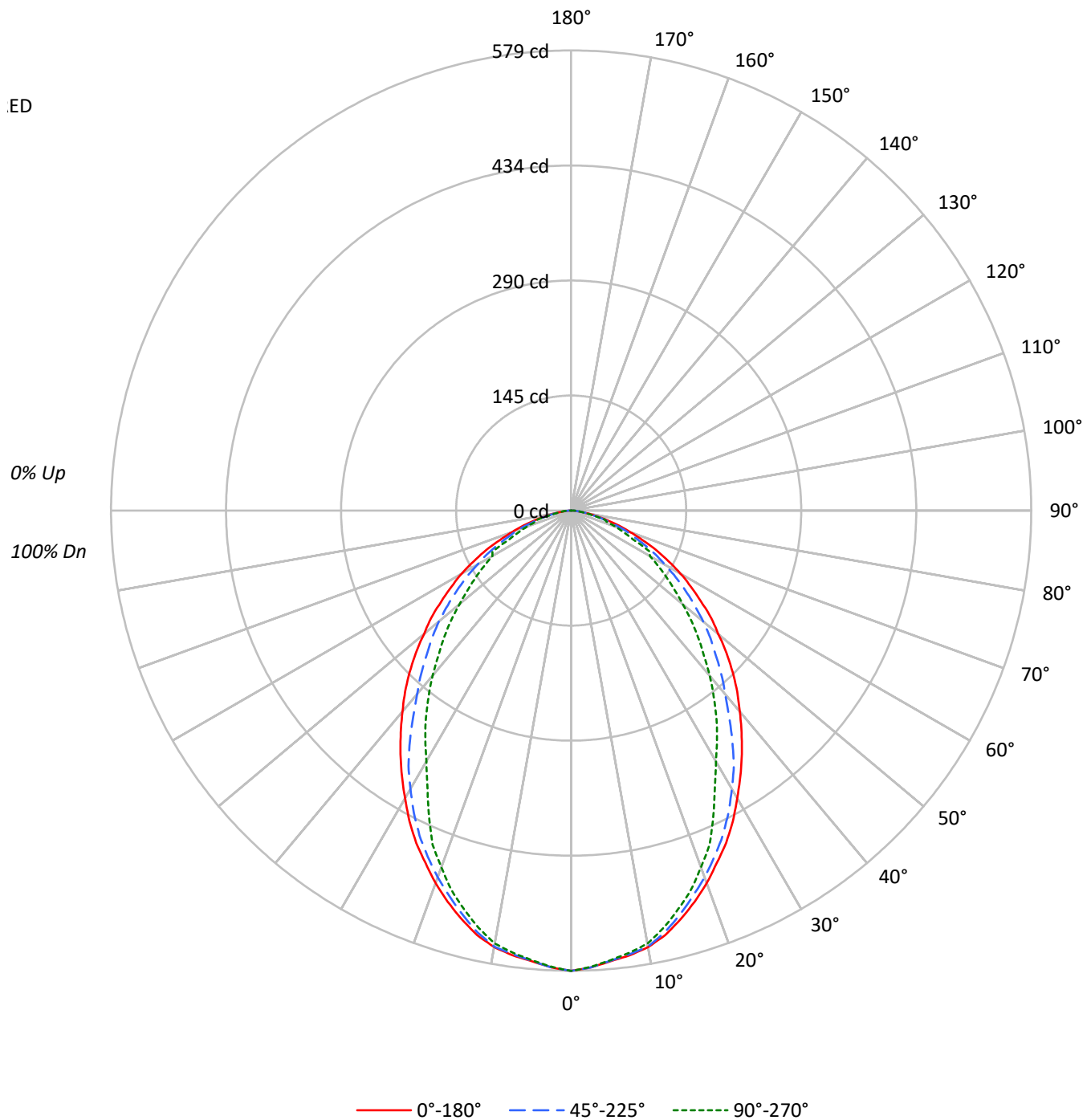
Lumens per Lamp: N/A
Luminaire Lumens: 1137.0 lumens
Efficiency: N/A
Efficacy: 97.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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°	6234	6234	6234
5°	6149	6143	6135
10°	6096	6089	6045
15°	5932	5872	5790
20°	5714	5622	5468
25°	5479	5360	5026
30°	5193	5026	4527
35°	4918	4645	4188
40°	4638	4234	3811
45°	4372	3914	3445
50°	4047	3632	3073
55°	3744	3292	2751
60°	3432	2941	2465
65°	3018	2575	2183
70°	2486	2253	1854
75°	1975	1726	1809
80°	1327	1246	1159
85°	827	988	1161

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4372 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.9	4.7
10°-20°	148.0	13.0
20°-30°	204.8	18.0
30°-40°	218.4	19.2
40°-50°	199.3	17.5
50°-60°	156.1	13.7
60°-70°	101.7	8.9
70°-80°	45.1	4.0
80°-90°	9.7	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°	406.7	35.8
0°-40°	625.1	55.0
0°-60°	980.5	86.2
0°-90°	1137.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1137.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	579	579	579	579	579	
5°	569	568	568	568	568	54
15°	532	532	527	522	520	150
25°	461	459	451	435	423	212
35°	374	372	354	327	319	234
45°	287	281	257	236	226	221
55°	200	194	175	155	147	179
65°	118	112	101	103	86	117
75°	48	44	42	40	44	51
85°	7	7	8	9	9	9
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	579.2	579.2	579.2	579.2	579.2
2.5°	575.2	575.2	575.2	574.5	574.5
5°	569.1	568.5	568.5	567.8	567.8
7.5°	564.4	563.8	563.1	562.4	561.1
10°	557.7	557.7	557.1	553.7	553.1
12.5°	547.0	546.4	543.7	539.0	537.7
15°	532.3	532.3	526.9	521.6	519.6
17.5°	516.2	515.6	508.9	503.5	500.8
20°	498.8	497.5	490.8	482.1	477.4
22.5°	479.4	479.4	471.4	460.0	455.3
25°	461.3	458.7	451.3	435.2	423.2
27.5°	440.6	436.6	428.5	405.8	391.7
30°	417.8	415.8	404.4	375.0	364.2
32.5°	396.4	393.0	381.0	350.2	341.5
35°	374.3	371.6	353.5	326.7	318.7
37.5°	352.2	348.8	326.1	304.7	294.6
40°	330.1	326.1	301.3	281.9	271.2
42.5°	309.3	304.0	279.9	259.1	247.1
45°	287.2	281.2	257.1	235.7	226.3
47.5°	265.1	259.8	237.7	215.6	204.9
50°	241.7	237.0	216.9	194.8	183.5
52.5°	222.3	214.9	195.5	173.4	164.0
55°	199.5	193.5	175.4	154.7	146.6
57.5°	178.8	172.7	156.0	136.6	129.9
60°	159.4	150.7	136.6	119.9	114.5
62.5°	137.9	131.2	119.2	105.1	111.8
65°	118.5	111.8	101.1	103.1	85.7
67.5°	97.1	93.7	84.4	75.0	72.3
70°	79.0	75.0	71.6	61.6	58.9
72.5°	62.9	58.9	54.2	48.9	46.9
75°	47.5	44.2	41.5	39.5	43.5
77.5°	32.8	31.5	29.5	27.5	26.8
80°	21.4	20.8	20.1	19.4	18.7
82.5°	12.7	12.7	12.7	12.7	12.7
85°	6.7	7.4	8.0	8.7	9.4
87.5°	4.0	4.0	4.7	5.4	6.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)