

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: P559885

Luminaire Tested: FSR-12-2-LD4-1LO-40-UNV-81-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559885
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-LD4-1LO-40-UNV-81-96-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1083.0 lumens
Efficiency: N/A
Efficacy: 92.6 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

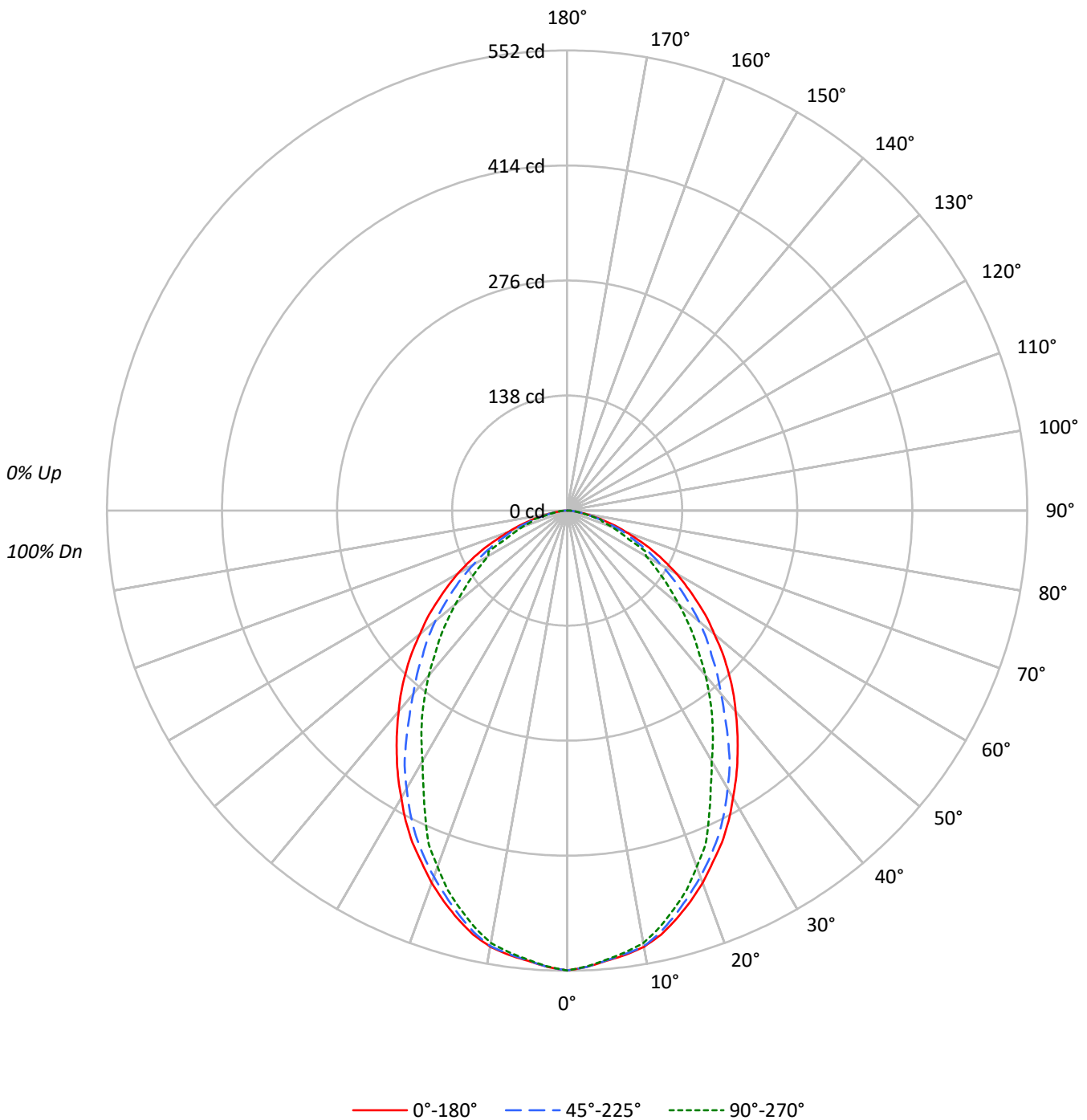
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2969	2969	2969
5°	2929	2925	2922
10°	2904	2900	2879
15°	2825	2796	2757
20°	2721	2678	2604
25°	2609	2553	2394
30°	2473	2394	2156
35°	2342	2212	1995
40°	2209	2016	1815
45°	2082	1864	1641
50°	1927	1730	1463
55°	1784	1568	1311
60°	1634	1400	1174
65°	1438	1226	1039
70°	1185	1073	883
75°	942	821	863
80°	632	592	555
85°	395	475	550

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2082 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.4	4.7
10°-20°	140.9	13.0
20°-30°	195.1	18.0
30°-40°	208.1	19.2
40°-50°	189.8	17.5
50°-60°	148.7	13.7
60°-70°	96.9	8.9
70°-80°	42.9	4.0
80°-90°	9.2	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°	387.4	35.8
0°-40°	595.5	55.0
0°-60°	933.9	86.2
0°-90°	1083.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1083.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	552	552	552	552	552	
5°	542	542	542	541	541	51
15°	507	507	502	497	495	143
25°	439	437	430	414	403	202
35°	356	354	337	311	304	223
45°	274	268	245	224	216	211
55°	190	184	167	147	140	170
65°	113	106	96	98	82	111
75°	45	42	40	38	42	49
85°	6	7	8	8	9	9
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	551.7	551.7	551.7	551.7	551.7
2.5°	547.8	547.8	547.8	547.2	547.2
5°	542.1	541.5	541.5	540.8	540.8
7.5°	537.6	537.0	536.4	535.7	534.4
10°	531.3	531.3	530.6	527.4	526.8
12.5°	521.1	520.4	517.9	513.4	512.1
15°	507.0	507.0	501.9	496.8	494.9
17.5°	491.7	491.1	484.7	479.6	477.0
20°	475.1	473.9	467.5	459.2	454.7
22.5°	456.6	456.6	449.0	438.1	433.7
25°	439.4	436.9	429.9	414.5	403.1
27.5°	419.6	415.8	408.2	386.5	373.1
30°	398.0	396.1	385.2	357.1	346.9
32.5°	377.6	374.4	362.9	333.6	325.3
35°	356.5	354.0	336.7	311.2	303.6
37.5°	335.5	332.3	310.6	290.2	280.6
40°	314.4	310.6	287.0	268.5	258.3
42.5°	294.6	289.5	266.6	246.8	235.3
45°	273.6	267.9	244.9	224.5	215.6
47.5°	252.6	247.5	226.4	205.4	195.2
50°	230.2	225.8	206.6	185.6	174.7
52.5°	211.7	204.7	186.2	165.2	156.3
55°	190.1	184.3	167.1	147.3	139.7
57.5°	170.3	164.5	148.6	130.1	123.7
60°	151.8	143.5	130.1	114.2	109.1
62.5°	131.4	125.0	113.5	100.1	106.5
65°	112.9	106.5	96.3	98.2	81.6
67.5°	92.5	89.3	80.4	71.4	68.9
70°	75.3	71.4	68.2	58.7	56.1
72.5°	59.9	56.1	51.7	46.6	44.6
75°	45.3	42.1	39.5	37.6	41.5
77.5°	31.3	30.0	28.1	26.1	25.5
80°	20.4	19.8	19.1	18.5	17.9
82.5°	12.1	12.1	12.1	12.1	12.1
85°	6.4	7.0	7.7	8.3	8.9
87.5°	3.8	3.8	4.5	5.1	5.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)