

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: P559595

Luminaire Tested: FSR-12-1-LD4-2STD-50-UNV-93-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559595
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-LD4-2STD-50-UNV-93-94-EDD
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 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: 1623.0 lumens
Efficiency: N/A
Efficacy: 97.8 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

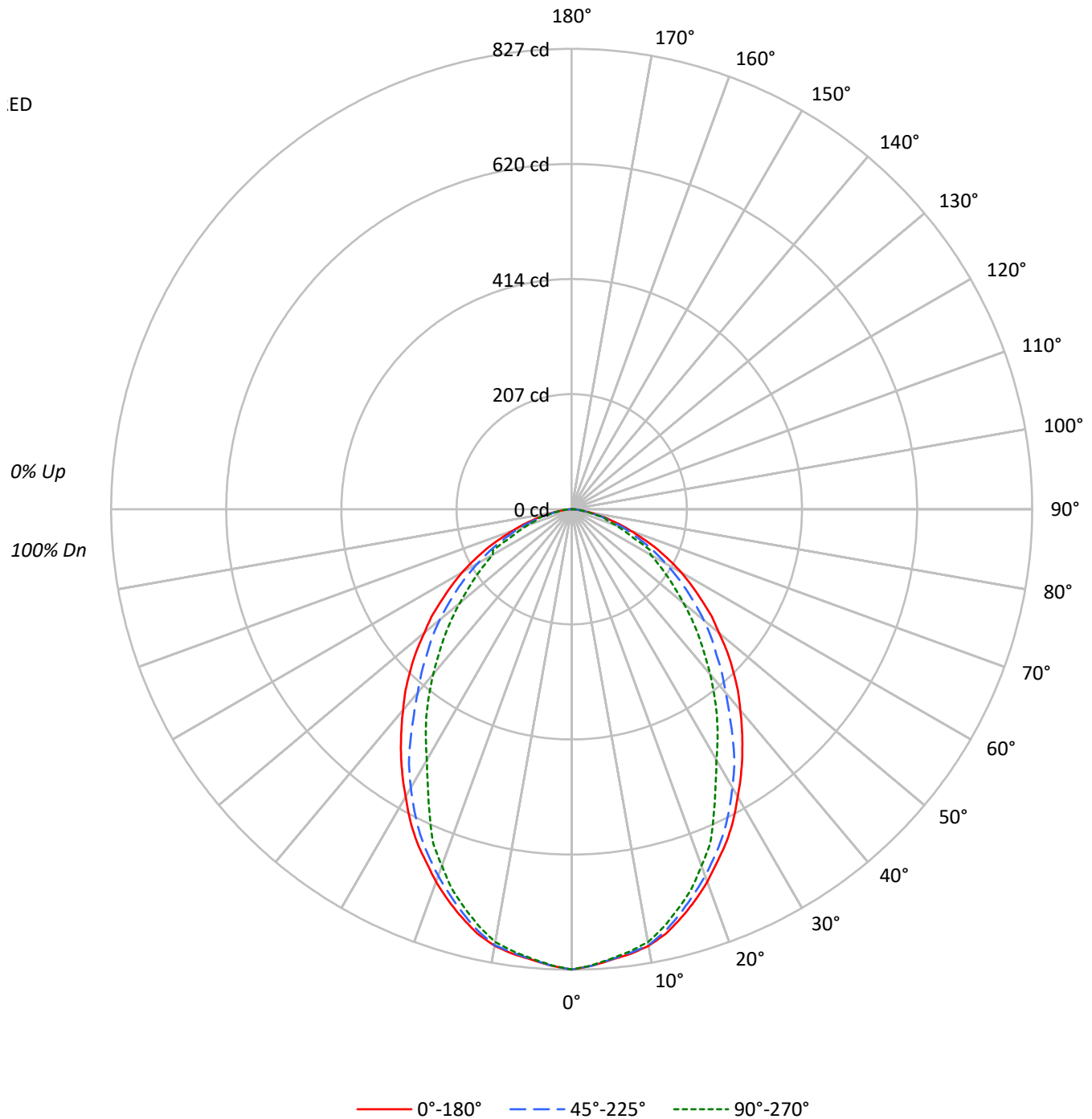
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	8899	8899	8899
5°	8778	8767	8757
10°	8702	8692	8629
15°	8467	8382	8265
20°	8156	8025	7806
25°	7821	7651	7174
30°	7413	7175	6462
35°	7021	6631	5978
40°	6621	6043	5439
45°	6241	5587	4917
50°	5777	5186	4386
55°	5345	4699	3928
60°	4898	4198	3518
65°	4309	3675	3115
70°	3550	3220	2647
75°	2824	2466	2583
80°	1897	1779	1661
85°	1186	1420	1655

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6241 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.0	4.7
10°-20°	211.2	13.0
20°-30°	292.4	18.0
30°-40°	311.8	19.2
40°-50°	284.4	17.5
50°-60°	222.8	13.7
60°-70°	145.2	8.9
70°-80°	64.3	4.0
80°-90°	13.8	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°	580.6	35.8
0°-40°	892.3	55.0
0°-60°	1399.6	86.2
0°-90°	1623.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1623.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	827	827	827	827	827	
5°	812	811	811	810	810	77
15°	760	760	752	744	742	214
25°	658	655	644	621	604	302
35°	534	530	505	466	455	334
45°	410	401	367	336	323	316
55°	285	276	250	221	209	255
65°	169	160	144	147	122	167
75°	68	63	59	56	62	73
85°	10	10	12	12	13	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	826.7	826.7	826.7	826.7	826.7
2.5°	821.0	821.0	821.0	820.0	820.0
5°	812.4	811.4	811.4	810.5	810.5
7.5°	805.7	804.8	803.8	802.8	800.9
10°	796.2	796.2	795.2	790.4	789.5
12.5°	780.9	779.9	776.1	769.4	767.5
15°	759.8	759.8	752.2	744.5	741.7
17.5°	736.9	735.9	726.4	718.7	714.9
20°	712.0	710.1	700.6	688.1	681.5
22.5°	684.3	684.3	672.9	656.6	649.9
25°	658.5	654.7	644.2	621.2	604.0
27.5°	628.9	623.2	611.7	579.2	559.1
30°	596.4	593.5	577.3	535.2	519.9
32.5°	565.8	561.0	543.8	499.9	487.4
35°	534.3	530.4	504.6	466.4	454.9
37.5°	502.7	498.0	465.5	434.9	420.5
40°	471.2	465.5	430.1	402.4	387.1
42.5°	441.6	433.9	399.5	369.9	352.7
45°	410.0	401.4	367.0	336.4	323.0
47.5°	378.5	370.8	339.3	307.8	292.5
50°	345.0	338.3	309.7	278.1	261.9
52.5°	317.3	306.8	279.1	247.5	234.2
55°	284.8	276.2	250.4	220.8	209.3
57.5°	255.2	246.6	222.7	195.0	185.4
60°	227.5	215.0	195.0	171.1	163.4
62.5°	196.9	187.3	170.1	150.1	159.6
65°	169.2	159.6	144.3	147.2	122.3
67.5°	138.6	133.8	120.4	107.0	103.2
70°	112.8	107.0	102.3	87.9	84.1
72.5°	89.8	84.1	77.4	69.8	66.9
75°	67.9	63.1	59.3	56.4	62.1
77.5°	46.8	44.9	42.1	39.2	38.2
80°	30.6	29.6	28.7	27.7	26.8
82.5°	18.2	18.2	18.2	18.2	18.2
85°	9.6	10.5	11.5	12.4	13.4
87.5°	5.7	5.7	6.7	7.6	8.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)