

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: P559470

Luminaire Tested: FSR-12-1-LD4-2STD-35-UNV-93-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559470
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-35-UNV-93-97-EDD-90
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1261.0 lumens
Efficiency: N/A
Efficacy: 76.0 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

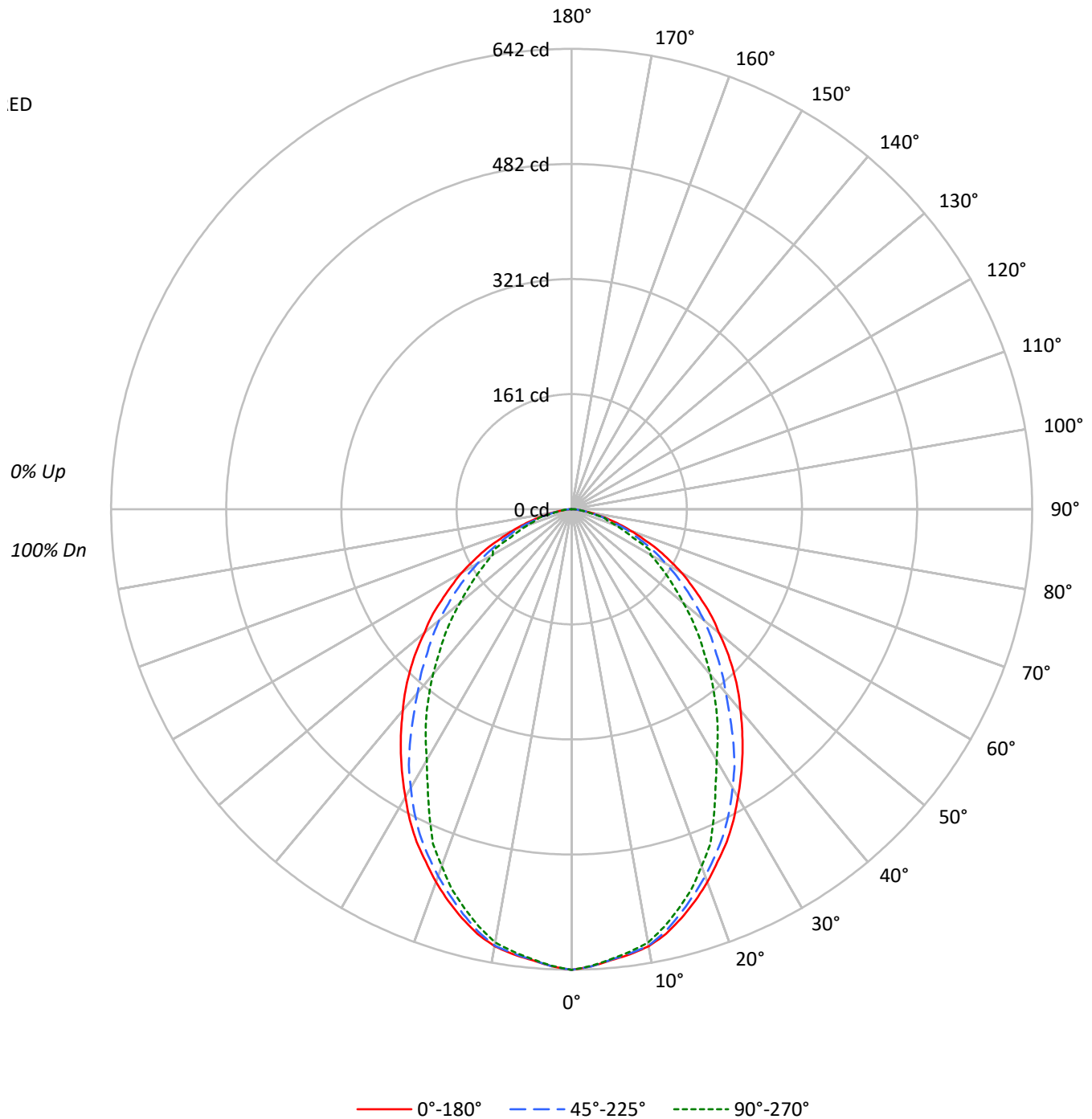
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6914	6914	6914
5°	6820	6813	6804
10°	6761	6753	6704
15°	6579	6512	6421
20°	6337	6235	6065
25°	6076	5944	5574
30°	5760	5574	5021
35°	5455	5152	4645
40°	5144	4696	4225
45°	4850	4341	3821
50°	4490	4029	3408
55°	4153	3652	3051
60°	3804	3261	2734
65°	3347	2855	2422
70°	2757	2502	2055
75°	2192	1913	2009
80°	1475	1382	1289
85°	914	1099	1284

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4850 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.8	4.7
10°-20°	164.1	13.0
20°-30°	227.2	18.0
30°-40°	242.2	19.2
40°-50°	221.0	17.5
50°-60°	173.1	13.7
60°-70°	112.8	8.9
70°-80°	50.0	4.0
80°-90°	10.7	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°	451.1	35.8
0°-40°	693.3	55.0
0°-60°	1087.4	86.2
0°-90°	1261.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1261.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	642	642	642	642	642	
5°	631	630	630	630	630	60
15°	590	590	584	578	576	166
25°	512	509	500	483	469	235
35°	415	412	392	362	354	260
45°	319	312	285	261	251	245
55°	221	215	195	172	163	198
65°	131	124	112	114	95	130
75°	53	49	46	44	48	57
85°	7	8	9	10	10	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	642.3	642.3	642.3	642.3	642.3
2.5°	637.9	637.9	637.9	637.1	637.1
5°	631.2	630.5	630.5	629.7	629.7
7.5°	626.0	625.3	624.5	623.8	622.3
10°	618.6	618.6	617.8	614.1	613.4
12.5°	606.7	605.9	603.0	597.8	596.3
15°	590.4	590.4	584.4	578.5	576.2
17.5°	572.5	571.8	564.4	558.4	555.5
20°	553.2	551.7	544.3	534.7	529.5
22.5°	531.7	531.7	522.8	510.2	505.0
25°	511.6	508.7	500.5	482.7	469.3
27.5°	488.6	484.2	475.3	450.0	434.4
30°	463.4	461.1	448.5	415.8	404.0
32.5°	439.6	435.9	422.5	388.4	378.7
35°	415.1	412.1	392.1	362.4	353.5
37.5°	390.6	386.9	361.6	337.9	326.7
40°	366.1	361.6	334.2	312.6	300.7
42.5°	343.1	337.1	310.4	287.4	274.0
45°	318.6	311.9	285.2	261.4	251.0
47.5°	294.1	288.1	263.6	239.1	227.2
50°	268.1	262.9	240.6	216.1	203.5
52.5°	246.5	238.4	216.8	192.3	181.9
55°	221.3	214.6	194.6	171.5	162.6
57.5°	198.3	191.6	173.0	151.5	144.1
60°	176.7	167.1	151.5	132.9	127.0
62.5°	153.0	145.5	132.2	116.6	124.0
65°	131.4	124.0	112.1	114.4	95.1
67.5°	107.7	104.0	93.6	83.2	80.2
70°	87.6	83.2	79.5	68.3	65.3
72.5°	69.8	65.3	60.1	54.2	52.0
75°	52.7	49.0	46.0	43.8	48.3
77.5°	36.4	34.9	32.7	30.4	29.7
80°	23.8	23.0	22.3	21.5	20.8
82.5°	14.1	14.1	14.1	14.1	14.1
85°	7.4	8.2	8.9	9.7	10.4
87.5°	4.5	4.5	5.2	5.9	6.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)