

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: P559532

Luminaire Tested: FSR-12-1-LD4-2STD-40-UNV-93-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559532
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-40-UNV-93-96-EDD-90
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1326.0 lumens
Efficiency: N/A
Efficacy: 79.9 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

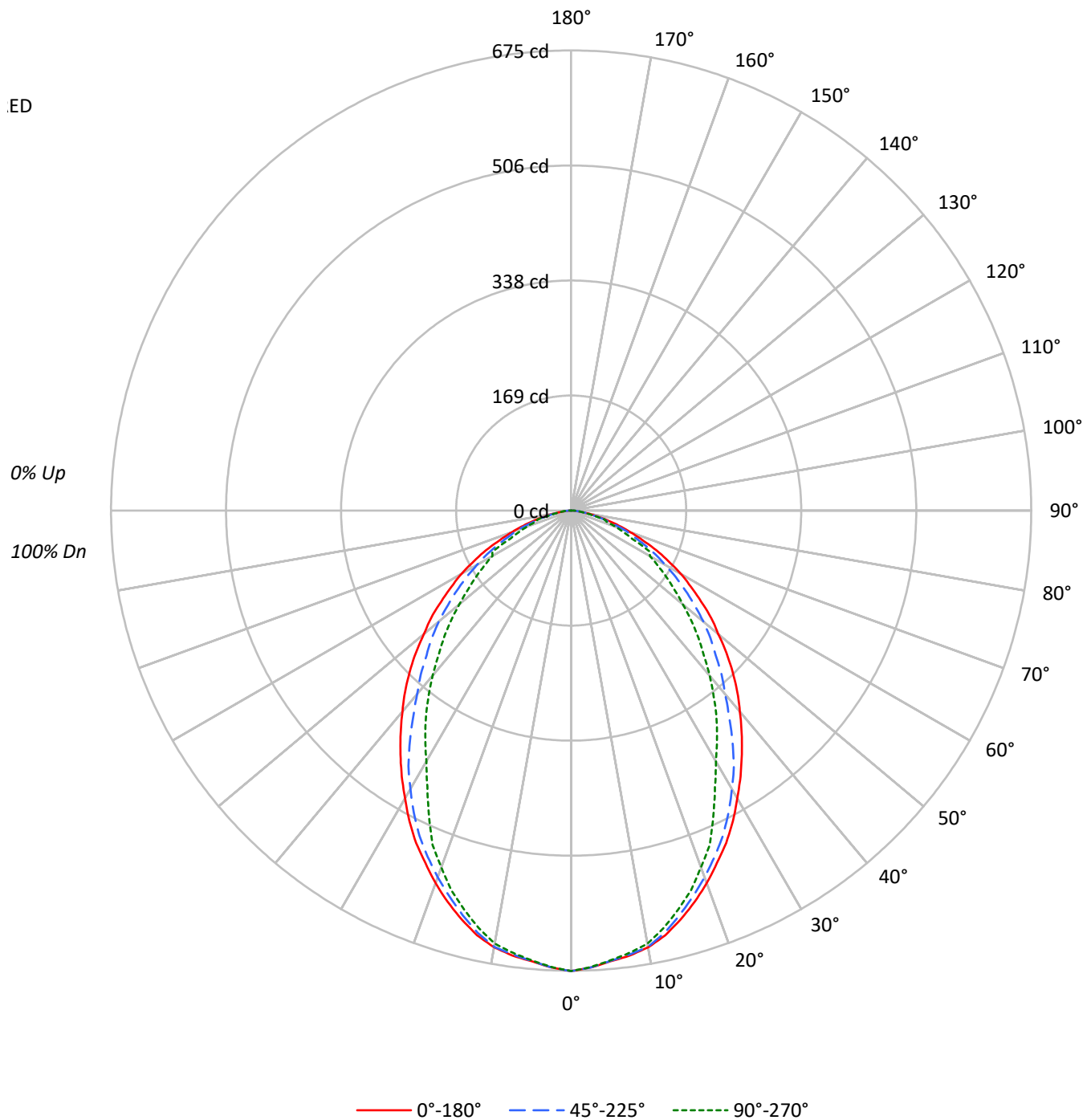
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7270	7270	7270
5°	7171	7164	7155
10°	7110	7101	7050
15°	6918	6848	6752
20°	6663	6557	6378
25°	6390	6251	5861
30°	6057	5862	5280
35°	5736	5418	4884
40°	5410	4938	4443
45°	5100	4565	4017
50°	4721	4237	3584
55°	4367	3840	3209
60°	4000	3429	2874
65°	3520	3003	2547
70°	2899	2631	2162
75°	2304	2013	2113
80°	1550	1450	1358
85°	963	1161	1346

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5100 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.9	4.7
10°-20°	172.6	13.0
20°-30°	238.9	18.0
30°-40°	254.7	19.2
40°-50°	232.4	17.5
50°-60°	182.1	13.7
60°-70°	118.7	8.9
70°-80°	52.6	4.0
80°-90°	11.3	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°	474.3	35.8
0°-40°	729.1	55.0
0°-60°	1143.5	86.2
0°-90°	1326.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1326.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	675	675	675	675	675	
5°	664	663	663	662	662	63
15°	621	621	614	608	606	175
25°	538	535	526	508	494	247
35°	436	433	412	381	372	273
45°	335	328	300	275	264	258
55°	233	226	205	180	171	209
65°	138	130	118	120	100	136
75°	55	52	48	46	51	59
85°	8	9	9	10	11	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	675.4	675.4	675.4	675.4	675.4
2.5°	670.8	670.8	670.8	670.0	670.0
5°	663.7	663.0	663.0	662.2	662.2
7.5°	658.3	657.5	656.7	655.9	654.4
10°	650.5	650.5	649.7	645.8	645.0
12.5°	638.0	637.2	634.1	628.6	627.0
15°	620.8	620.8	614.5	608.3	605.9
17.5°	602.0	601.3	593.5	587.2	584.1
20°	581.7	580.2	572.4	562.2	556.8
22.5°	559.1	559.1	549.7	536.5	531.0
25°	538.0	534.9	526.3	507.6	493.5
27.5°	513.8	509.1	499.8	473.2	456.8
30°	487.3	484.9	471.6	437.3	424.8
32.5°	462.3	458.4	444.3	408.4	398.2
35°	436.5	433.4	412.3	381.1	371.7
37.5°	410.7	406.8	380.3	355.3	343.6
40°	385.0	380.3	351.4	328.7	316.2
42.5°	360.8	354.5	326.4	302.2	288.1
45°	335.0	328.0	299.9	274.9	263.9
47.5°	309.2	303.0	277.2	251.4	238.9
50°	281.9	276.4	253.0	227.2	214.0
52.5°	259.2	250.7	228.0	202.2	191.3
55°	232.7	225.7	204.6	180.4	171.0
57.5°	208.5	201.5	181.9	159.3	151.5
60°	185.8	175.7	159.3	139.8	133.5
62.5°	160.9	153.0	139.0	122.6	130.4
65°	138.2	130.4	117.9	120.3	100.0
67.5°	113.2	109.3	98.4	87.5	84.3
70°	92.1	87.5	83.6	71.8	68.7
72.5°	73.4	68.7	63.2	57.0	54.7
75°	55.4	51.5	48.4	46.1	50.8
77.5°	38.3	36.7	34.4	32.0	31.2
80°	25.0	24.2	23.4	22.6	21.9
82.5°	14.8	14.8	14.8	14.8	14.8
85°	7.8	8.6	9.4	10.2	10.9
87.5°	4.7	4.7	5.5	6.2	7.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)