

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: P560162

Luminaire Tested: FSR-12-2-LD4-1STD-50-UNV-93-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560162
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-LD4-1STD-50-UNV-93-85-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1339.0 lumens
Efficiency: N/A
Efficacy: 80.7 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

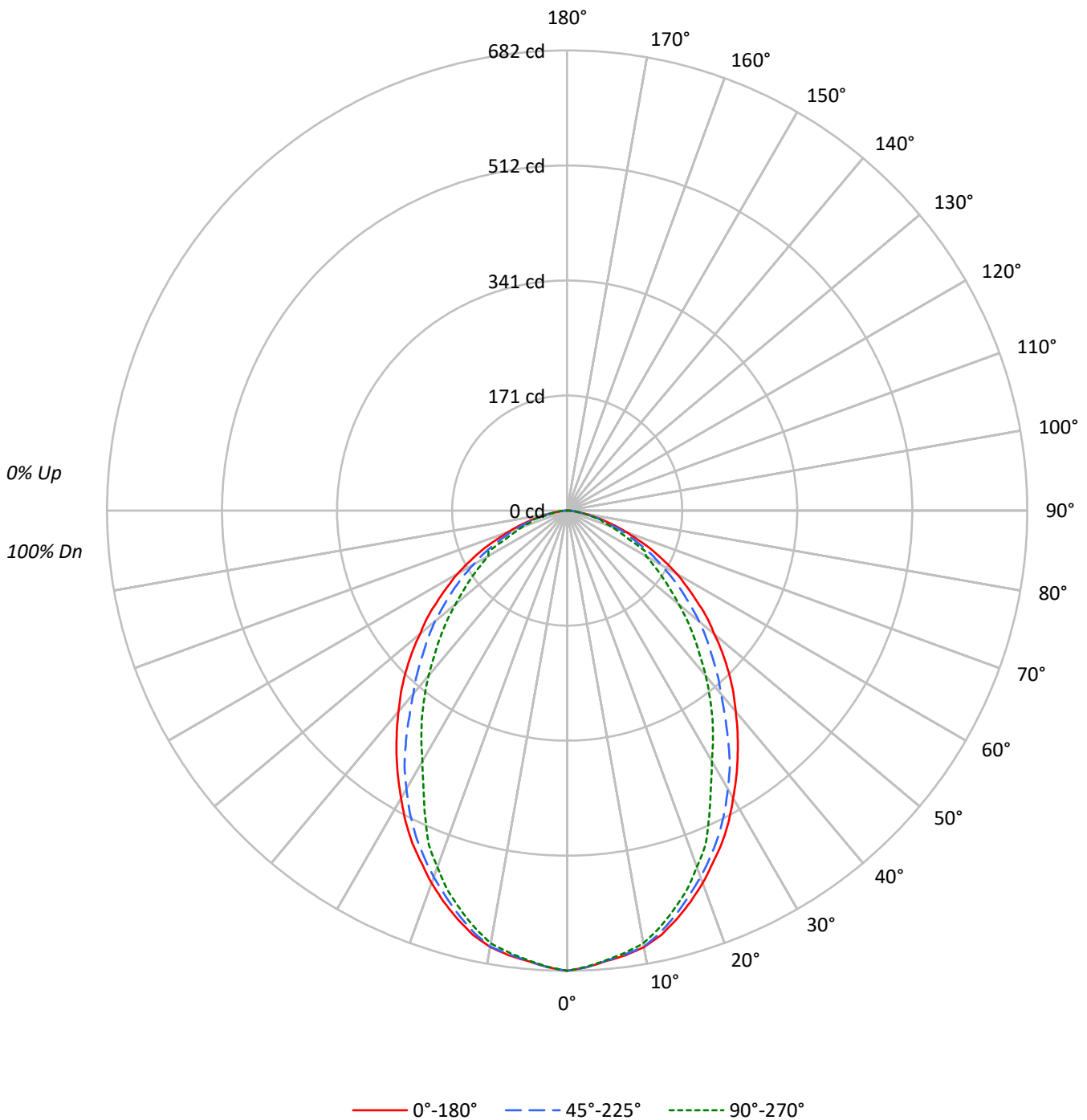
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3671	3671	3671
5°	3621	3617	3613
10°	3589	3585	3559
15°	3493	3458	3409
20°	3364	3310	3220
25°	3226	3156	2959
30°	3058	2960	2666
35°	2896	2735	2466
40°	2731	2493	2244
45°	2575	2305	2028
50°	2384	2139	1809
55°	2205	1939	1620
60°	2020	1732	1451
65°	1778	1517	1285
70°	1463	1328	1092
75°	1164	1017	1067
80°	781	735	685
85°	488	587	679

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2575 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.5	4.7
10°-20°	174.2	13.0
20°-30°	241.2	18.0
30°-40°	257.2	19.2
40°-50°	234.7	17.5
50°-60°	183.8	13.7
60°-70°	119.8	8.9
70°-80°	53.1	4.0
80°-90°	11.4	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°	479.0	35.8
0°-40°	736.2	55.0
0°-60°	1154.7	86.2
0°-90°	1339.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1339.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	682	682	682	682	682	
5°	670	670	670	669	669	64
15°	627	627	621	614	612	176
25°	543	540	532	512	498	249
35°	441	438	416	385	375	276
45°	338	331	303	278	266	261
55°	235	228	207	182	173	211
65°	140	132	119	121	101	138
75°	56	52	49	46	51	60
85°	8	9	10	10	11	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	682.1	682.1	682.1	682.1	682.1
2.5°	677.3	677.3	677.3	676.5	676.5
5°	670.2	669.5	669.5	668.7	668.7
7.5°	664.7	663.9	663.1	662.4	660.8
10°	656.8	656.8	656.0	652.1	651.3
12.5°	644.2	643.4	640.3	634.8	633.2
15°	626.9	626.9	620.6	614.3	611.9
17.5°	607.9	607.2	599.3	593.0	589.8
20°	587.4	585.9	578.0	567.7	562.2
22.5°	564.6	564.6	555.1	541.7	536.2
25°	543.3	540.1	531.5	512.5	498.3
27.5°	518.8	514.1	504.7	477.8	461.3
30°	492.0	489.7	476.3	441.6	429.0
32.5°	466.8	462.9	448.7	412.4	402.1
35°	440.8	437.6	416.3	384.8	375.3
37.5°	414.8	410.8	384.0	358.8	346.9
40°	388.7	384.0	354.8	332.0	319.4
42.5°	364.3	358.0	329.6	305.2	291.0
45°	338.3	331.2	302.8	277.6	266.5
47.5°	312.3	305.9	279.9	253.9	241.3
50°	284.7	279.1	255.5	229.5	216.1
52.5°	261.8	253.1	230.2	204.2	193.2
55°	235.0	227.9	206.6	182.1	172.7
57.5°	210.5	203.4	183.7	160.9	153.0
60°	187.7	177.4	160.9	141.1	134.8
62.5°	162.4	154.5	140.4	123.8	131.7
65°	139.6	131.7	119.1	121.4	100.9
67.5°	114.3	110.4	99.4	88.3	85.2
70°	93.0	88.3	84.4	72.5	69.4
72.5°	74.1	69.4	63.9	57.6	55.2
75°	56.0	52.0	48.9	46.5	51.3
77.5°	38.6	37.1	34.7	32.3	31.5
80°	25.2	24.4	23.7	22.9	22.1
82.5°	15.0	15.0	15.0	15.0	15.0
85°	7.9	8.7	9.5	10.3	11.0
87.5°	4.7	4.7	5.5	6.3	7.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)