

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: P559721

Luminaire Tested: FSR-12-2-LD4-1HI-40-UNV-93-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559721
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-LD4-1HI-40-UNV-93-88-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1599.0 lumens
Efficiency: N/A
Efficacy: 74.0 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

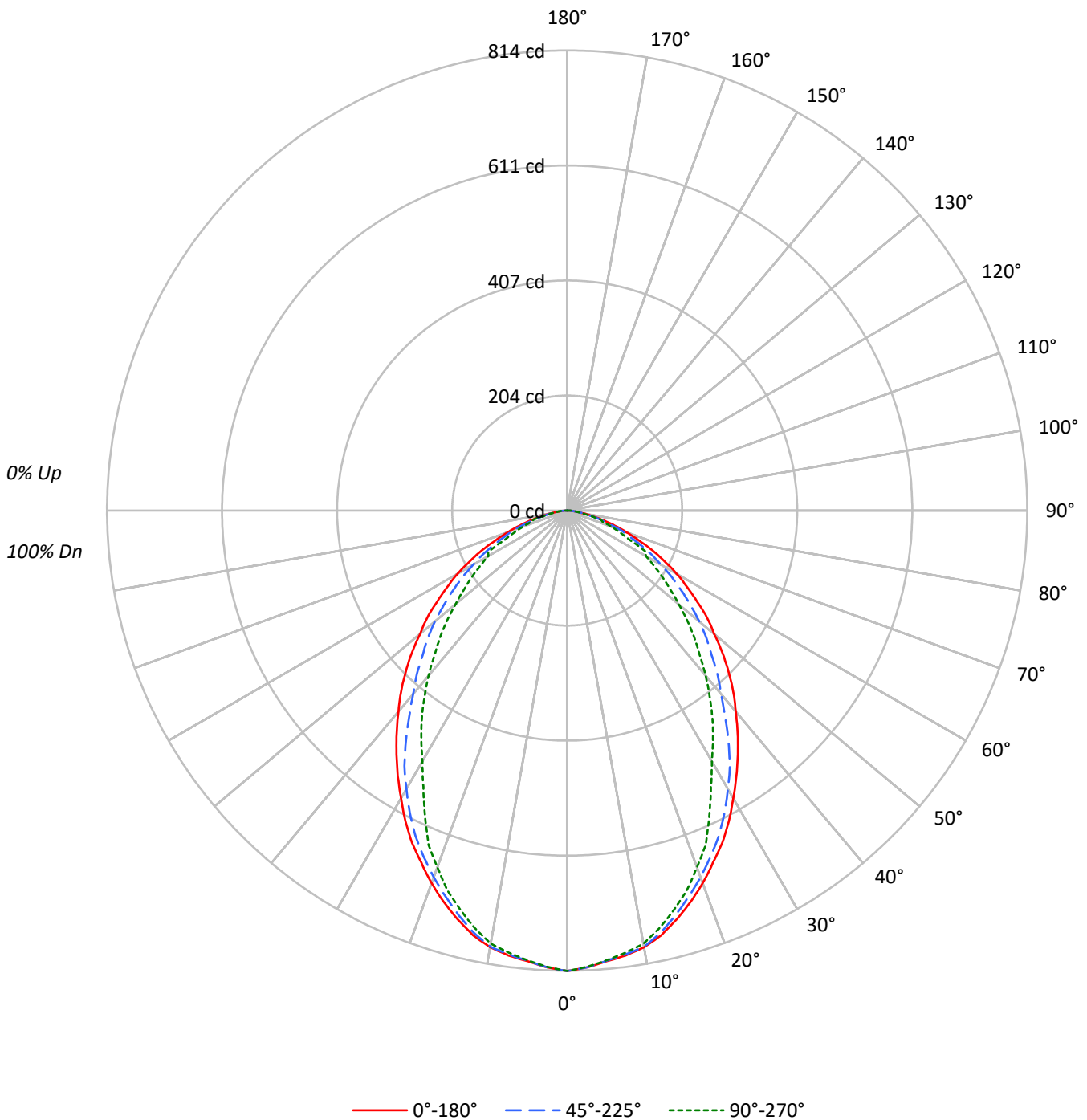
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4384	4384	4384
5°	4324	4319	4314
10°	4287	4281	4251
15°	4171	4129	4071
20°	4018	3953	3845
25°	3853	3769	3534
30°	3652	3534	3183
35°	3459	3267	2945
40°	3261	2977	2680
45°	3075	2752	2423
50°	2846	2555	2160
55°	2633	2315	1935
60°	2412	2068	1733
65°	2123	1811	1535
70°	1748	1586	1304
75°	1391	1214	1273
80°	933	874	818
85°	580	698	815

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3075 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.8	4.7
10°-20°	208.1	13.0
20°-30°	288.1	18.0
30°-40°	307.2	19.2
40°-50°	280.2	17.5
50°-60°	219.5	13.7
60°-70°	143.1	8.9
70°-80°	63.4	4.0
80°-90°	13.6	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°	572.0	35.8
0°-40°	879.1	55.0
0°-60°	1378.9	86.2
0°-90°	1599.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1599.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	814	814	814	814	814	
5°	800	799	799	798	798	76
15°	749	749	741	734	731	210
25°	649	645	635	612	595	298
35°	526	523	497	460	448	329
45°	404	396	362	332	318	311
55°	281	272	247	218	206	252
65°	167	157	142	145	120	164
75°	67	62	58	56	61	72
85°	9	10	11	12	13	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	814.5	814.5	814.5	814.5	814.5
2.5°	808.9	808.9	808.9	807.9	807.9
5°	800.4	799.4	799.4	798.5	798.5
7.5°	793.8	792.9	791.9	791.0	789.1
10°	784.4	784.4	783.4	778.7	777.8
12.5°	769.3	768.4	764.6	758.0	756.1
15°	748.6	748.6	741.1	733.5	730.7
17.5°	726.0	725.1	715.6	708.1	704.3
20°	701.5	699.6	690.2	678.0	671.4
22.5°	674.2	674.2	662.9	646.9	640.3
25°	648.8	645.0	634.7	612.1	595.1
27.5°	619.6	613.9	602.6	570.6	550.9
30°	587.6	584.8	568.7	527.3	512.2
32.5°	557.4	552.7	535.8	492.5	480.2
35°	526.4	522.6	497.2	459.5	448.2
37.5°	495.3	490.6	458.6	428.4	414.3
40°	464.2	458.6	423.7	396.4	381.4
42.5°	435.0	427.5	393.6	364.4	347.5
45°	404.0	395.5	361.6	331.5	318.3
47.5°	372.9	365.4	334.3	303.2	288.1
50°	339.9	333.3	305.1	274.0	258.0
52.5°	312.6	302.3	275.0	243.9	230.7
55°	280.6	272.1	246.7	217.5	206.2
57.5°	251.4	242.9	219.4	192.1	182.7
60°	224.1	211.9	192.1	168.6	161.0
62.5°	194.0	184.6	167.6	147.8	157.3
65°	166.7	157.3	142.2	145.0	120.5
67.5°	136.5	131.8	118.6	105.5	101.7
70°	111.1	105.5	100.8	86.6	82.9
72.5°	88.5	82.9	76.3	68.7	65.9
75°	66.9	62.1	58.4	55.6	61.2
77.5°	46.1	44.3	41.4	38.6	37.7
80°	30.1	29.2	28.2	27.3	26.4
82.5°	17.9	17.9	17.9	17.9	17.9
85°	9.4	10.4	11.3	12.2	13.2
87.5°	5.6	5.6	6.6	7.5	8.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)