

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: P589874

Luminaire Tested: FSR-24-2-LD4-1HI-35-UNV-93-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589874
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-1HI-35-UNV-93-94-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2404.0 lumens
Efficiency: N/A
Efficacy: 111.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

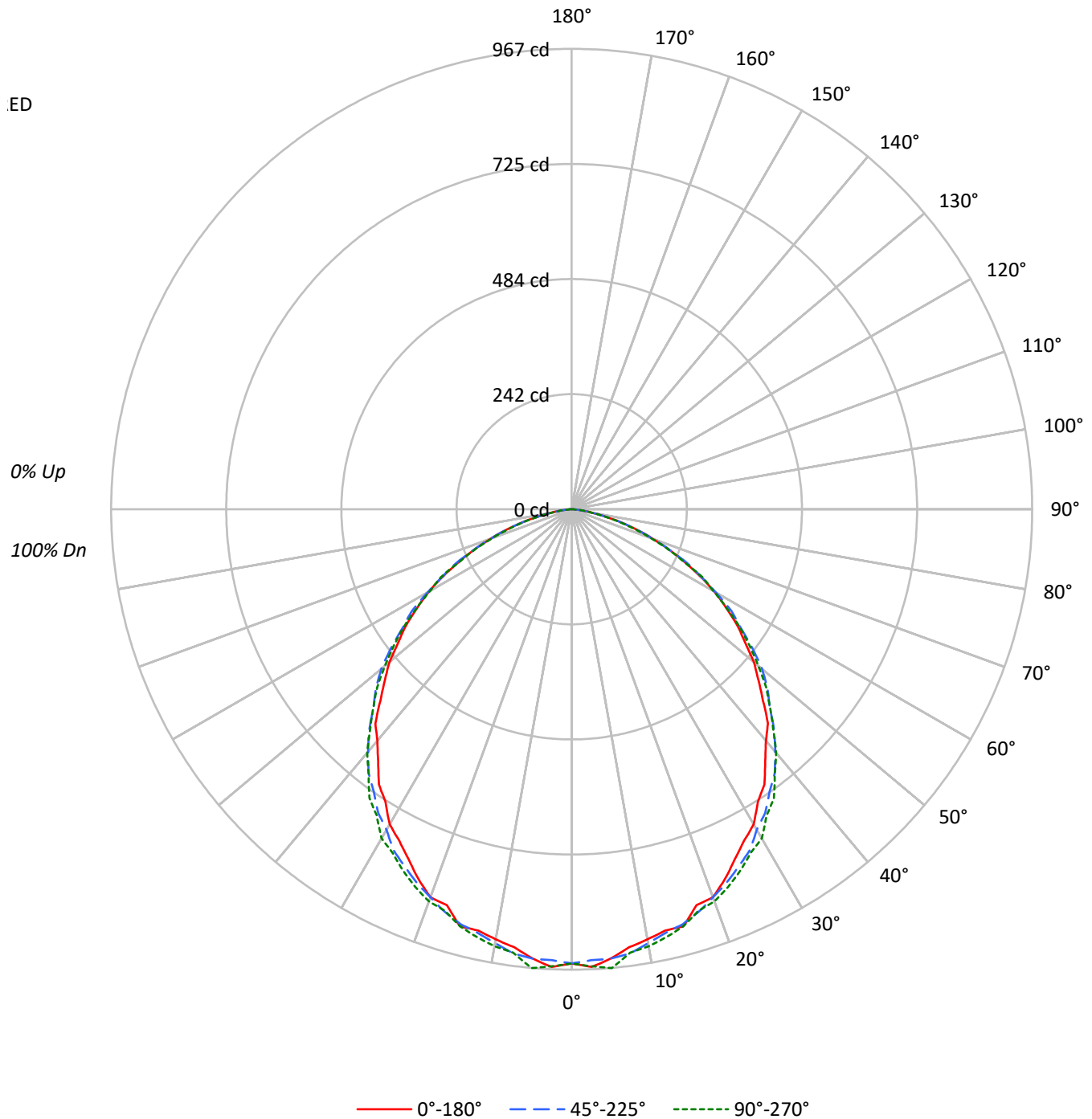
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2567	2567	2567
5°	2558	2559	2613
10°	2507	2528	2546
15°	2526	2513	2527
20°	2484	2484	2510
25°	2407	2460	2487
30°	2374	2416	2480
35°	2318	2379	2432
40°	2228	2335	2346
45°	2161	2237	2241
50°	2090	2184	2142
55°	1991	2030	2016
60°	1862	1880	1847
65°	1660	1703	1649
70°	1424	1430	1389
75°	1128	1126	1082
80°	756	735	707
85°	411	408	380

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2295 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.7	3.7
10°-20°	254.3	10.6
20°-30°	381.0	15.8
30°-40°	451.5	18.8
40°-50°	452.4	18.8
50°-60°	384.0	16.0
60°-70°	258.9	10.8
70°-80°	113.8	4.7
80°-90°	18.5	0.8
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°	725.0	30.2
0°-40°	1176.5	48.9
0°-60°	2012.9	83.7
0°-90°	2404.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2404.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	954	954	954	954	954	
5°	947	945	947	945	967	89
15°	907	896	902	907	907	253
25°	811	815	828	839	838	375
35°	706	708	724	741	740	438
45°	568	578	588	603	589	439
55°	424	422	433	430	430	378
65°	261	257	267	257	259	259
75°	108	106	108	101	104	116
85°	13	13	13	13	12	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	953.8	953.8	953.8	953.8	953.8
2.5°	962.1	954.8	948.1	955.9	960.7
5°	947.1	944.9	947.4	944.6	967.4
7.5°	927.6	936.1	941.0	938.0	939.3
10°	917.3	914.3	925.3	932.9	931.8
12.5°	906.2	910.6	911.2	919.5	920.2
15°	906.8	896.3	901.9	906.6	906.9
17.5°	871.6	882.9	886.7	897.4	884.1
20°	867.3	859.0	867.3	878.2	876.5
22.5°	840.8	831.6	849.3	859.0	858.4
25°	810.7	815.2	828.5	839.3	837.6
27.5°	784.4	789.6	808.5	823.4	813.8
30°	764.1	761.5	777.5	790.8	798.2
32.5°	727.7	737.1	755.8	769.0	762.0
35°	705.7	707.8	724.2	740.9	740.4
37.5°	667.1	676.9	699.9	704.6	700.3
40°	634.3	644.0	664.8	669.8	667.8
42.5°	610.0	611.7	629.6	635.4	626.1
45°	567.8	578.3	587.9	603.1	588.8
47.5°	531.8	536.7	557.4	561.5	554.0
50°	499.2	500.9	521.7	516.6	511.7
52.5°	458.1	465.4	477.1	476.1	470.3
55°	424.4	421.6	432.6	429.7	429.6
57.5°	383.9	388.8	397.9	393.2	385.7
60°	345.9	346.1	349.4	344.1	343.1
62.5°	303.7	305.2	305.9	299.4	310.0
65°	260.7	257.3	267.4	257.2	258.9
67.5°	221.2	222.9	221.9	215.5	218.0
70°	181.0	183.3	181.7	174.4	176.6
72.5°	144.3	141.6	143.4	134.2	138.4
75°	108.5	106.3	108.3	100.6	104.1
77.5°	73.9	75.6	74.4	70.3	72.7
80°	48.8	47.4	47.4	45.1	45.6
82.5°	28.4	27.1	26.7	26.0	27.1
85°	13.3	12.9	13.2	12.8	12.3
87.5°	4.8	4.9	4.9	4.7	4.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)