

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: P589855

Luminaire Tested: FSR-24-2-LD4-1HI-35-UNV-81-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589855
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-81-86-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2203.0 lumens
Efficiency: N/A
Efficacy: 102.0 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

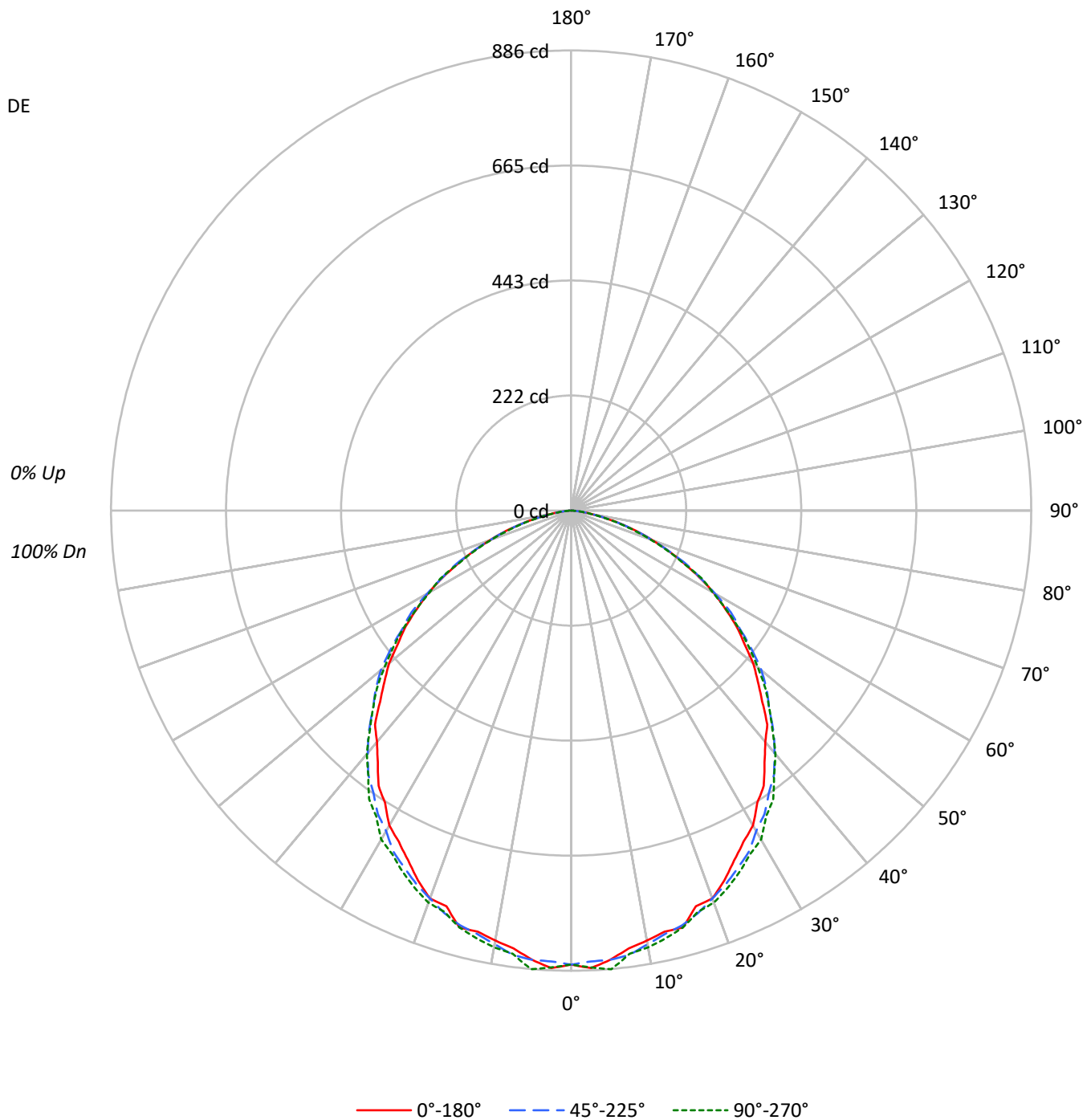
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2352	2352	2352
5°	2344	2345	2395
10°	2297	2317	2333
15°	2315	2303	2315
20°	2276	2276	2300
25°	2206	2254	2279
30°	2176	2214	2273
35°	2124	2180	2229
40°	2042	2140	2149
45°	1980	2050	2054
50°	1915	2002	1963
55°	1825	1860	1847
60°	1706	1723	1692
65°	1521	1560	1510
70°	1305	1310	1273
75°	1033	1031	992
80°	693	674	648
85°	377	374	349

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2103 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.2	3.7
10°-20°	233.0	10.6
20°-30°	349.1	15.8
30°-40°	413.8	18.8
40°-50°	414.5	18.8
50°-60°	351.9	16.0
60°-70°	237.2	10.8
70°-80°	104.3	4.7
80°-90°	16.9	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°	664.4	30.2
0°-40°	1078.2	48.9
0°-60°	1844.6	83.7
0°-90°	2203.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2203.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	874	874	874	874	874	
5°	868	866	868	866	886	82
15°	831	821	826	831	831	232
25°	743	747	759	769	768	343
35°	647	649	664	679	678	402
45°	520	530	539	553	540	402
55°	389	386	396	394	394	346
65°	239	236	245	236	237	238
75°	99	97	99	92	95	107
85°	12	12	12	12	11	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	874.1	874.1	874.1	874.1	874.1
2.5°	881.7	875.0	868.8	876.0	880.4
5°	867.9	865.9	868.2	865.6	886.5
7.5°	850.1	857.8	862.4	859.5	860.8
10°	840.6	837.9	847.9	854.9	853.9
12.5°	830.4	834.5	835.0	842.6	843.3
15°	831.0	821.4	826.5	830.8	831.1
17.5°	798.7	809.1	812.6	822.4	810.2
20°	794.8	787.2	794.8	804.8	803.2
22.5°	770.5	762.0	778.3	787.2	786.6
25°	743.0	747.0	759.2	769.1	767.6
27.5°	718.8	723.5	740.9	754.6	745.8
30°	700.2	697.8	712.5	724.7	731.4
32.5°	666.9	675.5	692.6	704.7	698.3
35°	646.7	648.6	663.6	679.0	678.5
37.5°	611.4	620.3	641.4	645.7	641.7
40°	581.2	590.1	609.2	613.8	611.9
42.5°	559.0	560.6	576.9	582.2	573.8
45°	520.3	530.0	538.8	552.7	539.6
47.5°	487.3	491.8	510.8	514.5	507.6
50°	457.4	459.0	478.1	473.4	468.9
52.5°	419.8	426.5	437.2	436.3	431.0
55°	388.9	386.3	396.5	393.8	393.7
57.5°	351.8	356.3	364.6	360.4	353.5
60°	317.0	317.1	320.2	315.3	314.4
62.5°	278.3	279.7	280.3	274.4	284.1
65°	238.9	235.8	245.0	235.7	237.2
67.5°	202.7	204.3	203.4	197.5	199.8
70°	165.9	167.9	166.5	159.8	161.8
72.5°	132.3	129.8	131.4	123.0	126.9
75°	99.4	97.4	99.2	92.2	95.4
77.5°	67.7	69.3	68.2	64.4	66.6
80°	44.7	43.5	43.5	41.3	41.8
82.5°	26.1	24.8	24.5	23.8	24.8
85°	12.2	11.9	12.1	11.7	11.3
87.5°	4.4	4.5	4.5	4.3	4.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)