

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: P589895

Luminaire Tested: FSR-24-2-LD4-1HI-40-UNV-82-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589895
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-40-UNV-82-86-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2178.0 lumens
Efficiency: N/A
Efficacy: 100.8 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

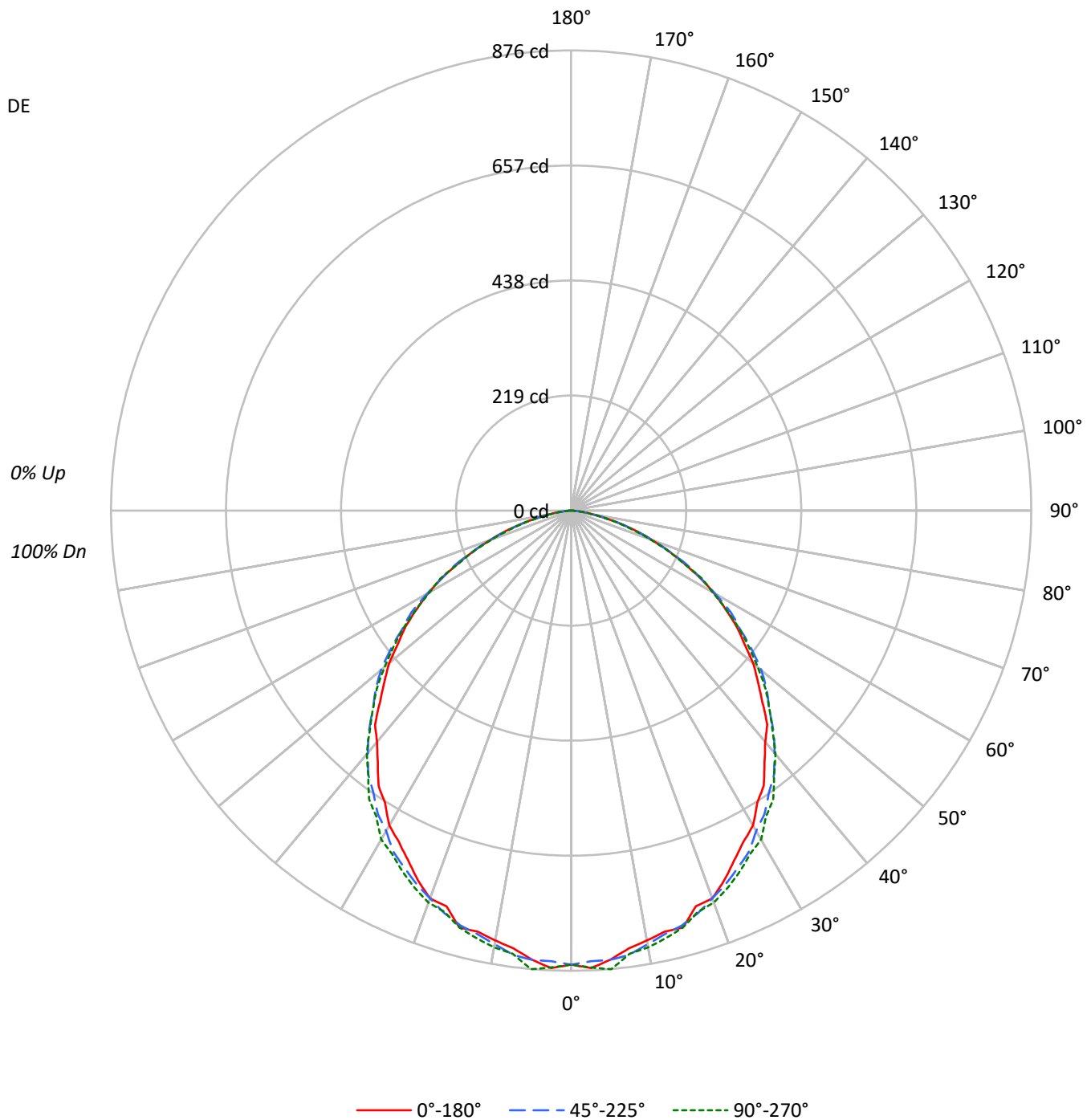
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2326	2326	2326
5°	2318	2319	2367
10°	2271	2291	2307
15°	2289	2276	2289
20°	2250	2250	2274
25°	2181	2229	2253
30°	2151	2189	2247
35°	2100	2155	2204
40°	2018	2116	2125
45°	1958	2027	2030
50°	1893	1979	1941
55°	1804	1839	1826
60°	1687	1703	1673
65°	1504	1542	1493
70°	1290	1295	1259
75°	1022	1020	980
80°	685	666	640
85°	374	367	346

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2079 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.3	3.7
10°-20°	230.4	10.6
20°-30°	345.2	15.8
30°-40°	409.1	18.8
40°-50°	409.8	18.8
50°-60°	347.9	16.0
60°-70°	234.6	10.8
70°-80°	103.1	4.7
80°-90°	16.7	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°	656.8	30.2
0°-40°	1065.9	48.9
0°-60°	1823.7	83.7
0°-90°	2178.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2178.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	864	864	864	864	864	
5°	858	856	858	856	876	81
15°	822	812	817	821	822	229
25°	734	738	751	760	759	340
35°	639	641	656	671	671	397
45°	514	524	533	546	534	398
55°	384	382	392	389	389	342
65°	236	233	242	233	234	235
75°	98	96	98	91	94	105
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°	864.2	864.2	864.2	864.2	864.2
2.5°	871.7	865.1	858.9	866.1	870.4
5°	858.0	856.0	858.4	855.8	876.4
7.5°	840.4	848.1	852.6	849.8	851.0
10°	831.0	828.4	838.3	845.2	844.2
12.5°	821.0	825.0	825.6	833.0	833.7
15°	821.6	812.1	817.1	821.3	821.7
17.5°	789.6	799.9	803.4	813.1	801.0
20°	785.7	778.3	785.7	795.7	794.1
22.5°	761.7	753.4	769.4	778.3	777.7
25°	734.5	738.5	750.6	760.4	758.8
27.5°	710.6	715.3	732.5	746.0	737.3
30°	692.2	689.9	704.4	716.4	723.1
32.5°	659.3	667.8	684.8	696.7	690.3
35°	639.3	641.2	656.1	671.3	670.8
37.5°	604.4	613.2	634.1	638.3	634.4
40°	574.6	583.4	602.3	606.9	605.0
42.5°	552.6	554.2	570.4	575.6	567.3
45°	514.4	524.0	532.7	546.4	533.5
47.5°	481.8	486.3	505.0	508.7	501.9
50°	452.2	453.8	472.6	468.1	463.6
52.5°	415.1	421.7	432.3	431.4	426.1
55°	384.5	381.9	392.0	389.3	389.2
57.5°	347.8	352.3	360.5	356.3	349.5
60°	313.4	313.5	316.5	311.8	310.9
62.5°	275.2	276.5	277.2	271.2	280.8
65°	236.2	233.1	242.2	233.0	234.5
67.5°	200.4	202.0	201.1	195.3	197.5
70°	164.0	166.0	164.6	158.0	160.0
72.5°	130.8	128.3	129.9	121.6	125.4
75°	98.3	96.3	98.1	91.2	94.3
77.5°	66.9	68.5	67.4	63.7	65.8
80°	44.2	43.0	43.0	40.8	41.3
82.5°	25.8	24.5	24.2	23.5	24.5
85°	12.1	11.7	11.9	11.6	11.2
87.5°	4.4	4.5	4.5	4.2	4.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)