

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: P589896

Luminaire Tested: FSR-24-2-LD4-1HI-40-UNV-82-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589896
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-82-87-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2108.0 lumens
Efficiency: N/A
Efficacy: 97.6 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

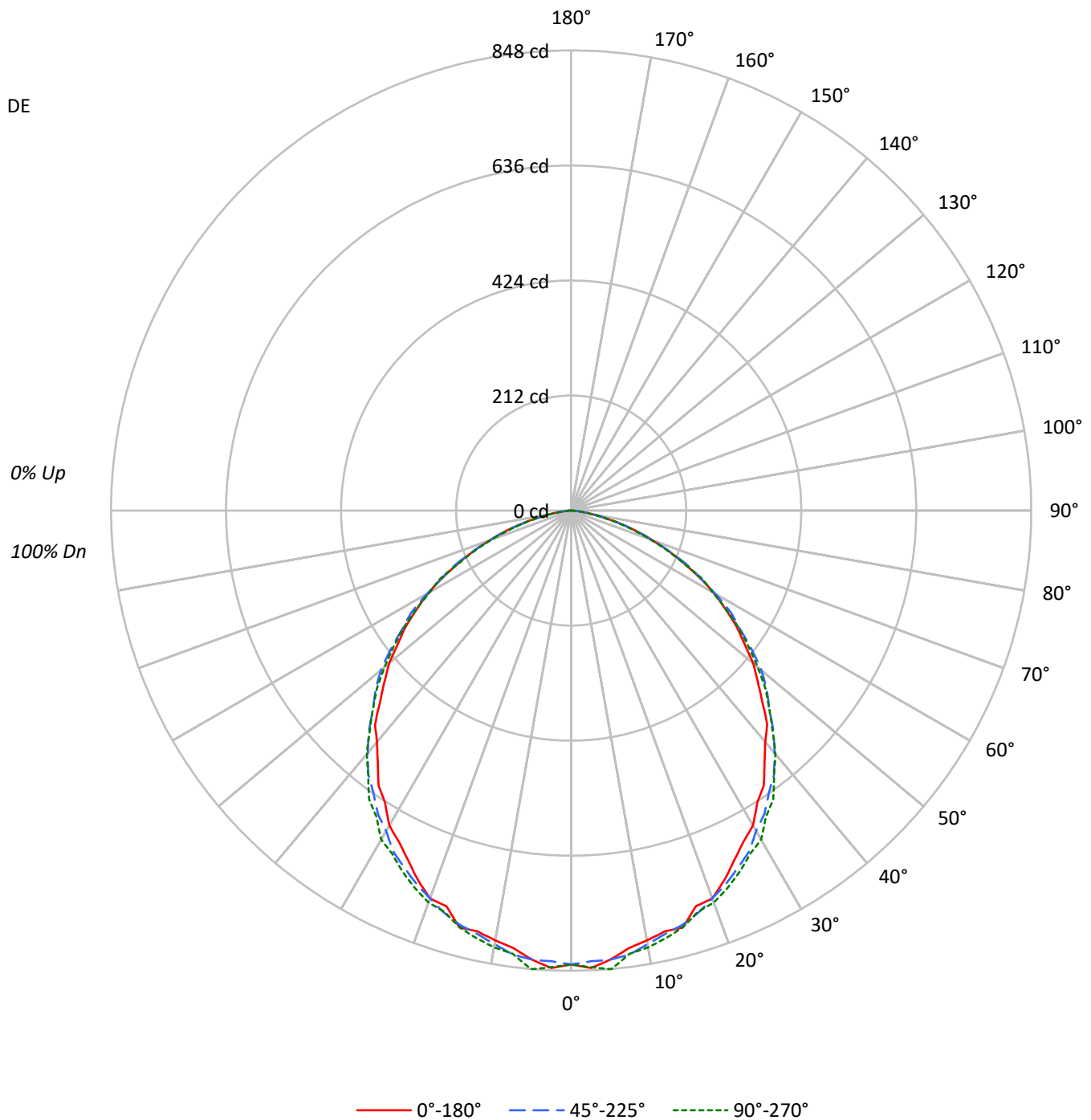
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2251	2251	2251
5°	2243	2244	2291
10°	2198	2217	2233
15°	2215	2203	2216
20°	2178	2178	2201
25°	2111	2157	2181
30°	2082	2119	2175
35°	2033	2086	2133
40°	1954	2048	2057
45°	1894	1962	1965
50°	1832	1915	1878
55°	1746	1780	1767
60°	1633	1649	1619
65°	1456	1493	1445
70°	1249	1253	1219
75°	989	987	949
80°	663	645	620
85°	361	358	333

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2012 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.7	3.7
10°-20°	223.0	10.6
20°-30°	334.1	15.8
30°-40°	395.9	18.8
40°-50°	396.7	18.8
50°-60°	336.7	16.0
60°-70°	227.0	10.8
70°-80°	99.7	4.7
80°-90°	16.2	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°	635.7	30.2
0°-40°	1031.6	48.9
0°-60°	1765.0	83.7
0°-90°	2108.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2108.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	836	836	836	836	836	
5°	830	828	831	828	848	78
15°	795	786	791	795	795	222
25°	711	715	726	736	734	329
35°	619	621	635	650	649	384
45°	498	507	516	529	516	385
55°	372	370	379	377	377	331
65°	229	226	234	226	227	227
75°	95	93	95	88	91	102
85°	12	11	12	11	11	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	836.4	836.4	836.4	836.4	836.4
2.5°	843.6	837.3	831.3	838.2	842.4
5°	830.5	828.5	830.8	828.3	848.3
7.5°	813.4	820.9	825.2	822.5	823.7
10°	804.3	801.7	811.3	818.0	817.1
12.5°	794.6	798.5	799.0	806.3	806.9
15°	795.1	786.0	790.8	794.9	795.3
17.5°	764.3	774.2	777.5	786.9	775.3
20°	760.5	753.2	760.5	770.1	768.6
22.5°	737.3	729.2	744.7	753.2	752.7
25°	710.9	714.8	726.5	736.0	734.5
27.5°	687.8	692.3	709.0	722.0	713.6
30°	670.0	667.7	681.8	693.4	699.9
32.5°	638.1	646.3	662.7	674.3	668.1
35°	618.8	620.6	635.0	649.7	649.3
37.5°	585.0	593.5	613.7	617.8	614.0
40°	556.2	564.7	582.9	587.4	585.5
42.5°	534.9	536.4	552.1	557.1	549.0
45°	497.8	507.1	515.6	528.8	516.3
47.5°	466.3	470.6	488.8	492.3	485.7
50°	437.7	439.2	457.5	453.0	448.7
52.5°	401.7	408.1	418.4	417.5	412.4
55°	372.1	369.7	379.4	376.8	376.7
57.5°	336.6	340.9	348.9	344.8	338.2
60°	303.4	303.5	306.4	301.7	300.9
62.5°	266.3	267.6	268.3	262.5	271.8
65°	228.6	225.6	234.5	225.5	227.0
67.5°	194.0	195.5	194.6	189.0	191.1
70°	158.7	160.7	159.3	152.9	154.9
72.5°	126.6	124.2	125.7	117.7	121.4
75°	95.1	93.2	94.9	88.2	91.3
77.5°	64.8	66.3	65.2	61.7	63.7
80°	42.8	41.6	41.6	39.5	40.0
82.5°	24.9	23.8	23.4	22.8	23.8
85°	11.7	11.3	11.6	11.2	10.8
87.5°	4.2	4.3	4.3	4.1	3.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)