

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: P589922

Luminaire Tested: FSR-24-2-LD4-1HI-50-UNV-81-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589922
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-50-UNV-81-94-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2341.0 lumens
Efficiency: N/A
Efficacy: 108.4 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

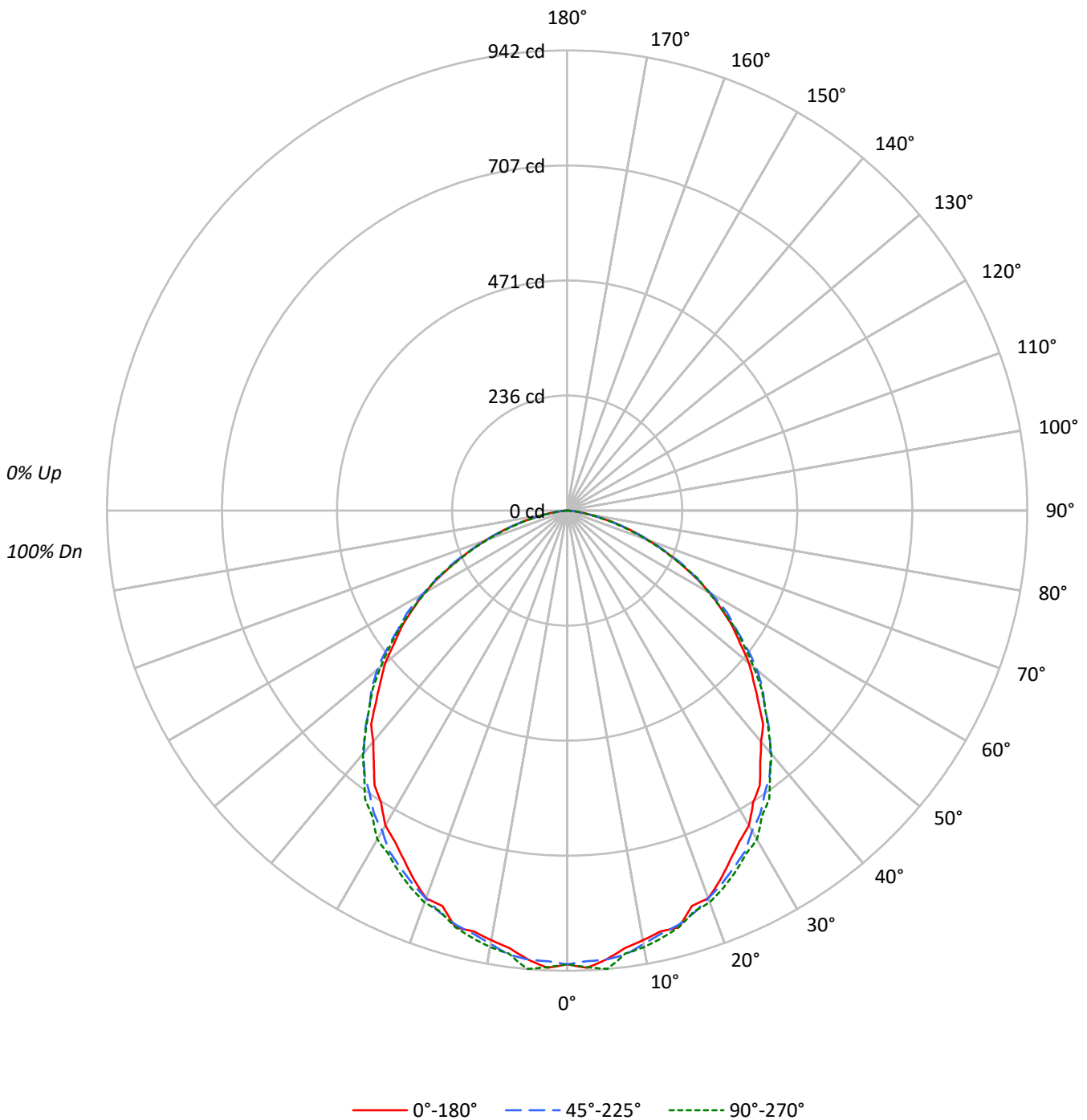
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2499	2499	2499
5°	2491	2492	2545
10°	2441	2462	2479
15°	2460	2447	2461
20°	2418	2418	2444
25°	2344	2396	2422
30°	2312	2353	2415
35°	2258	2317	2369
40°	2170	2274	2284
45°	2104	2179	2182
50°	2035	2127	2086
55°	1939	1977	1962
60°	1813	1831	1798
65°	1617	1658	1605
70°	1387	1392	1353
75°	1099	1096	1053
80°	736	716	688
85°	401	395	371

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2235 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.4	3.7
10°-20°	247.6	10.6
20°-30°	371.0	15.8
30°-40°	439.7	18.8
40°-50°	440.5	18.8
50°-60°	373.9	16.0
60°-70°	252.1	10.8
70°-80°	110.8	4.7
80°-90°	18.0	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°	706.0	30.2
0°-40°	1145.7	48.9
0°-60°	1960.1	83.7
0°-90°	2341.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2341.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	929	929	929	929	929	
5°	922	920	923	920	942	87
15°	883	873	878	883	883	246
25°	790	794	807	817	816	365
35°	687	689	705	722	721	427
45°	553	563	572	587	573	428
55°	413	410	421	418	418	368
65°	254	250	260	250	252	252
75°	106	104	105	98	101	113
85°	13	13	13	12	12	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	928.8	928.8	928.8	928.8	928.8
2.5°	936.9	929.8	923.2	930.9	935.6
5°	922.3	920.1	922.6	919.9	942.0
7.5°	903.3	911.6	916.4	913.4	914.7
10°	893.2	890.4	901.0	908.5	907.4
12.5°	882.4	886.8	887.4	895.4	896.1
15°	883.0	872.8	878.2	882.8	883.2
17.5°	848.7	859.8	863.5	873.9	861.0
20°	844.5	836.5	844.5	855.2	853.5
22.5°	818.8	809.8	827.0	836.5	835.9
25°	789.5	793.8	806.8	817.3	815.6
27.5°	763.8	768.9	787.3	801.8	792.5
30°	744.0	741.5	757.1	770.1	777.3
32.5°	708.7	717.8	736.0	748.8	742.0
35°	687.2	689.2	705.2	721.5	721.0
37.5°	649.7	659.1	681.6	686.1	681.9
40°	617.6	627.1	647.4	652.3	650.3
42.5°	594.0	595.7	613.1	618.7	609.7
45°	552.9	563.2	572.5	587.3	573.4
47.5°	517.9	522.7	542.8	546.8	539.4
50°	486.1	487.8	508.0	503.1	498.3
52.5°	446.1	453.2	464.6	463.6	458.0
55°	413.3	410.5	421.3	418.4	418.3
57.5°	373.8	378.6	387.5	382.9	375.6
60°	336.9	337.0	340.2	335.1	334.1
62.5°	295.7	297.2	297.9	291.5	301.9
65°	253.9	250.5	260.4	250.4	252.1
67.5°	215.4	217.1	216.1	209.9	212.3
70°	176.3	178.5	176.9	169.8	172.0
72.5°	140.6	137.9	139.6	130.7	134.8
75°	105.7	103.5	105.4	98.0	101.3
77.5°	72.0	73.6	72.4	68.5	70.8
80°	47.5	46.2	46.2	43.9	44.4
82.5°	27.7	26.4	26.0	25.3	26.4
85°	13.0	12.6	12.8	12.5	12.0
87.5°	4.7	4.8	4.8	4.6	4.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)