

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: P589876

Luminaire Tested: FSR-24-2-LD4-1HI-35-UNV-93-97-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589876
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-93-97-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 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: 2292.0 lumens
Efficiency: N/A
Efficacy: 106.1 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

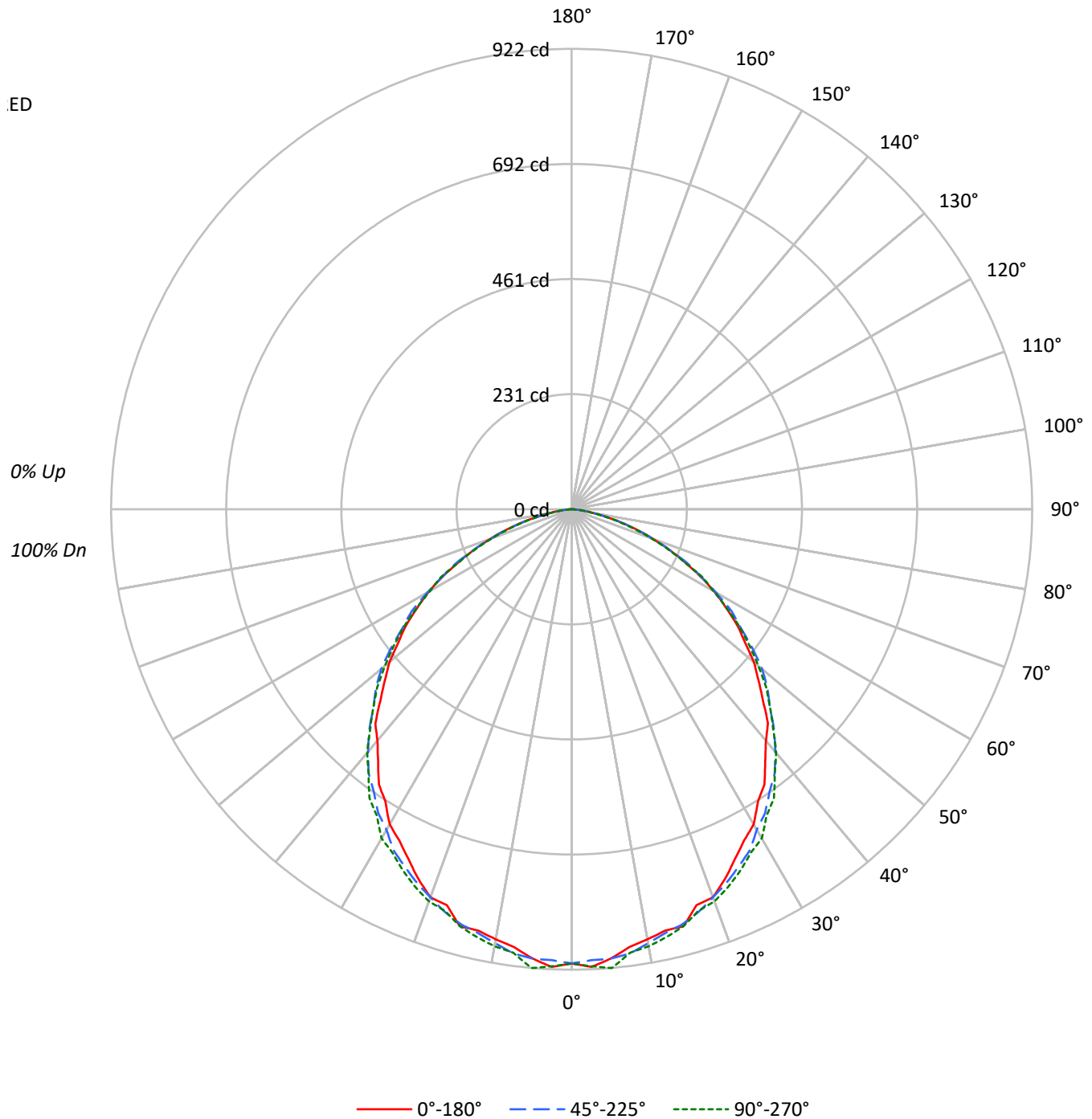
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P589876

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2447	2447	2447
5°	2439	2440	2491
10°	2390	2411	2428
15°	2409	2396	2409
20°	2368	2368	2393
25°	2295	2345	2371
30°	2264	2303	2365
35°	2210	2268	2319
40°	2124	2226	2236
45°	2060	2133	2136
50°	1992	2082	2043
55°	1898	1935	1922
60°	1775	1793	1760
65°	1583	1623	1571
70°	1358	1363	1325
75°	1075	1073	1031
80°	721	700	673
85°	392	389	361

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2188 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.5	3.7
10°-20°	242.4	10.6
20°-30°	363.2	15.8
30°-40°	430.5	18.8
40°-50°	431.3	18.8
50°-60°	366.1	16.0
60°-70°	246.8	10.8
70°-80°	108.4	4.7
80°-90°	17.6	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°	691.2	30.2
0°-40°	1121.7	48.9
0°-60°	1919.1	83.7
0°-90°	2292.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2292.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	909	909	909	909	909	
5°	903	901	903	901	922	85
15°	865	855	860	864	865	241
25°	773	777	790	800	799	357
35°	673	675	690	706	706	418
45°	541	551	561	575	561	419
55°	405	402	412	410	410	360
65°	249	245	255	245	247	247
75°	103	101	103	96	99	111
85°	13	12	13	12	12	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	909.4	909.4	909.4	909.4	909.4
2.5°	917.3	910.3	903.9	911.4	916.0
5°	902.9	900.8	903.3	900.6	922.3
7.5°	884.4	892.5	897.2	894.3	895.6
10°	874.5	871.7	882.2	889.4	888.4
12.5°	864.0	868.2	868.8	876.6	877.4
15°	864.6	854.6	859.9	864.3	864.7
17.5°	831.0	841.8	845.4	855.6	842.9
20°	826.9	819.0	826.9	837.3	835.7
22.5°	801.6	792.8	809.7	819.0	818.4
25°	773.0	777.2	789.9	800.2	798.6
27.5°	747.8	752.8	770.9	785.1	775.9
30°	728.5	726.0	741.3	753.9	761.0
32.5°	693.8	702.8	720.6	733.2	726.5
35°	672.8	674.8	690.4	706.4	705.9
37.5°	636.1	645.3	667.3	671.8	667.6
40°	604.7	614.0	633.8	638.6	636.6
42.5°	581.6	583.2	600.2	605.8	597.0
45°	541.3	551.4	560.6	575.0	561.4
47.5°	507.0	511.7	531.4	535.3	528.1
50°	475.9	477.5	497.4	492.6	487.9
52.5°	436.8	443.7	454.9	453.9	448.4
55°	404.6	401.9	412.5	409.7	409.6
57.5°	366.0	370.7	379.4	374.9	367.8
60°	329.8	329.9	333.1	328.1	327.1
62.5°	289.6	291.0	291.7	285.4	295.5
65°	248.6	245.3	254.9	245.2	246.8
67.5°	210.9	212.5	211.6	205.5	207.8
70°	172.6	174.7	173.2	166.3	168.4
72.5°	137.6	135.0	136.7	128.0	132.0
75°	103.4	101.3	103.2	95.9	99.2
77.5°	70.5	72.1	70.9	67.0	69.3
80°	46.5	45.2	45.2	43.0	43.4
82.5°	27.1	25.8	25.5	24.8	25.8
85°	12.7	12.3	12.6	12.2	11.7
87.5°	4.6	4.7	4.7	4.5	4.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)