

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: P562922

Luminaire Tested: FSR-24-4-LD4-2STD-35-UNV-93-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562922
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-4-LD4-2STD-35-UNV-93-94-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6559.1 lumens
Efficiency: N/A
Efficacy: 98.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

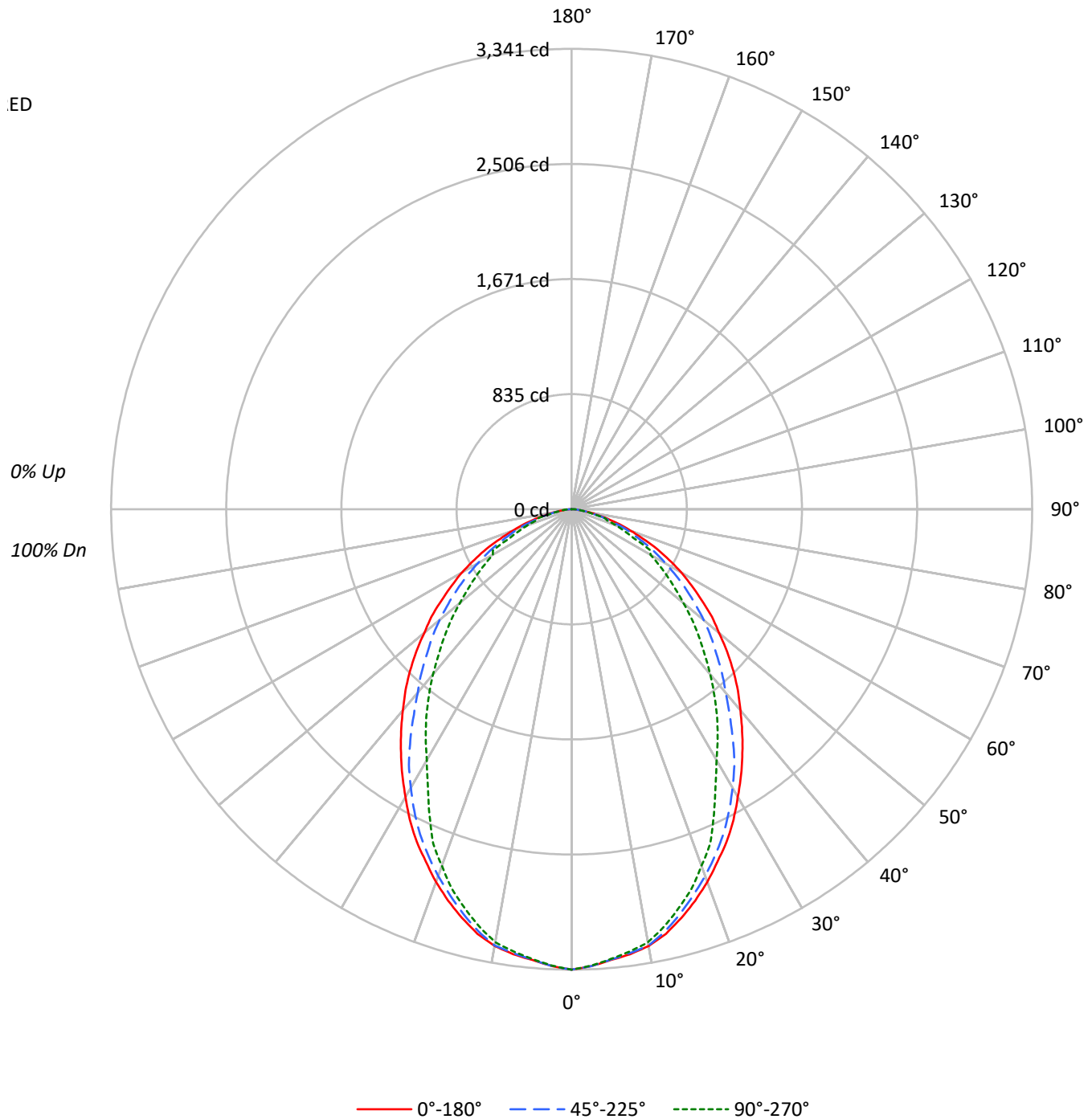
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																												
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																												
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																												
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																												
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																												
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																												
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																												
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																												
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																												
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4495	4495	4495
5°	4434	4429	4424
10°	4396	4391	4359
15°	4277	4234	4175
20°	4120	4054	3943
25°	3951	3865	3624
30°	3745	3625	3265
35°	3546	3350	3020
40°	3345	3053	2748
45°	3153	2822	2484
50°	2919	2620	2215
55°	2700	2374	1984
60°	2474	2120	1777
65°	2177	1857	1574
70°	1793	1626	1337
75°	1425	1245	1305
80°	958	898	838
85°	596	716	835

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3153 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	311.0	4.7
10°-20°	853.5	13.0
20°-30°	1181.7	18.0
30°-40°	1260.0	19.2
40°-50°	1149.5	17.5
50°-60°	900.5	13.7
60°-70°	586.9	8.9
70°-80°	260.0	4.0
80°-90°	55.8	0.9
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°	2346.2	35.8
0°-40°	3606.2	55.0
0°-60°	5656.2	86.2
0°-90°	6559.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6559.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3341	3341	3341	3341	3341	
5°	3283	3279	3279	3275	3275	312
15°	3071	3071	3040	3009	2997	863
25°	2661	2646	2603	2511	2441	1222
35°	2159	2144	2039	1885	1839	1350
45°	1657	1622	1483	1360	1306	1276
55°	1151	1116	1012	892	846	1032
65°	684	645	583	595	494	674
75°	274	255	240	228	251	294
85°	39	42	46	50	54	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3341.1	3341.1	3341.1	3341.1	3341.1
2.5°	3317.9	3317.9	3317.9	3314.0	3314.0
5°	3283.1	3279.3	3279.3	3275.4	3275.4
7.5°	3256.1	3252.2	3248.4	3244.5	3236.8
10°	3217.5	3217.5	3213.6	3194.3	3190.4
12.5°	3155.7	3151.8	3136.4	3109.3	3101.6
15°	3070.7	3070.7	3039.8	3008.9	2997.3
17.5°	2978.0	2974.1	2935.5	2904.6	2889.2
20°	2877.6	2869.8	2831.2	2781.0	2754.0
22.5°	2765.6	2765.6	2719.2	2653.5	2626.5
25°	2661.3	2645.8	2603.3	2510.6	2441.1
27.5°	2541.5	2518.4	2472.0	2340.7	2259.6
30°	2410.2	2398.6	2333.0	2163.0	2101.2
32.5°	2286.6	2267.3	2197.8	2020.1	1969.9
35°	2159.1	2143.7	2039.4	1884.9	1838.6
37.5°	2031.7	2012.4	1881.0	1757.4	1699.5
40°	1904.2	1881.0	1738.1	1626.1	1564.3
42.5°	1784.5	1753.6	1614.5	1494.8	1425.3
45°	1657.0	1622.3	1483.2	1359.6	1305.5
47.5°	1529.6	1498.7	1371.2	1243.7	1181.9
50°	1394.4	1367.3	1251.5	1124.0	1058.3
52.5°	1282.4	1239.9	1127.9	1000.4	946.3
55°	1151.0	1116.3	1012.0	892.2	845.9
57.5°	1031.3	996.5	900.0	788.0	749.3
60°	919.3	869.1	788.0	691.4	660.5
62.5°	795.7	757.1	687.5	606.4	645.0
65°	683.7	645.0	583.2	594.8	494.4
67.5°	560.1	540.8	486.7	432.6	417.2
70°	455.8	432.6	413.3	355.4	339.9
72.5°	363.1	339.9	312.9	282.0	270.4
75°	274.2	254.9	239.5	227.9	251.1
77.5°	189.3	181.5	170.0	158.4	154.5
80°	123.6	119.7	115.9	112.0	108.2
82.5°	73.4	73.4	73.4	73.4	73.4
85°	38.6	42.5	46.4	50.2	54.1
87.5°	23.2	23.2	27.0	30.9	34.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)