

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: P562731

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

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562731
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-LD4-2LO-35-UNV-93-94-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 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: 5853.0 lumens
Efficiency: N/A
Efficacy: 125.1 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

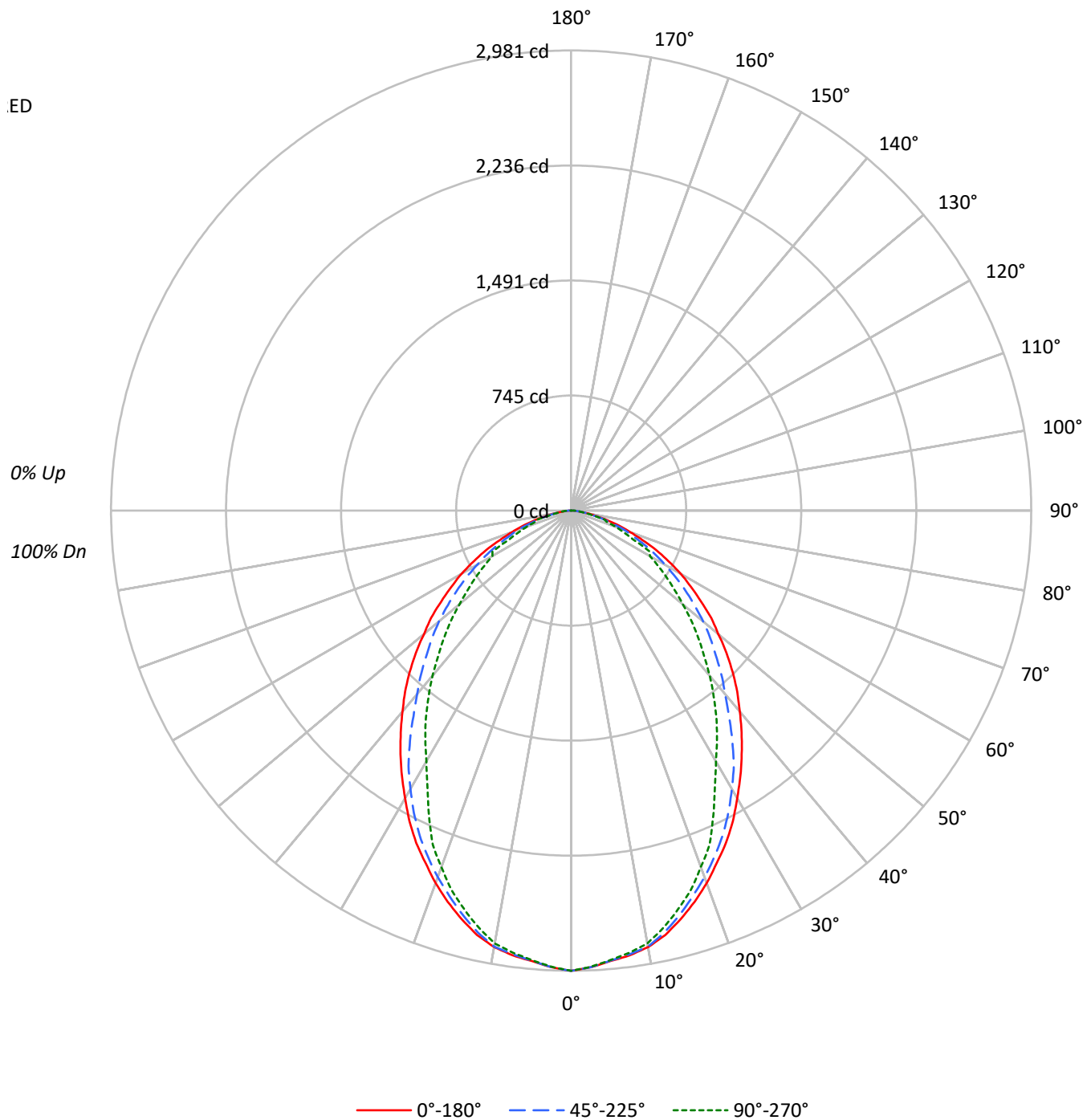
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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													100															
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87													87															
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75													75															
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65													65															
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56													56															
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50													50															
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44													44															
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40													40															
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36													36															
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33													33															
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30													30															

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4011	4011	4011
5°	3957	3952	3948
10°	3923	3918	3890
15°	3817	3779	3726
20°	3677	3618	3519
25°	3526	3449	3234
30°	3342	3234	2913
35°	3165	2989	2695
40°	2984	2724	2452
45°	2814	2519	2217
50°	2605	2337	1977
55°	2409	2118	1771
60°	2207	1892	1586
65°	1942	1657	1405
70°	1600	1451	1193
75°	1272	1111	1164
80°	855	801	748
85°	533	639	746

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2814 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	277.5	4.7
10°-20°	761.7	13.0
20°-30°	1054.5	18.0
30°-40°	1124.4	19.2
40°-50°	1025.8	17.5
50°-60°	803.6	13.7
60°-70°	523.7	8.9
70°-80°	232.0	4.0
80°-90°	49.8	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°	2093.7	35.8
0°-40°	3218.0	55.0
0°-60°	5047.4	86.2
0°-90°	5853.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5853.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2981	2981	2981	2981	2981	
5°	2930	2926	2926	2923	2923	278
15°	2740	2740	2713	2685	2675	770
25°	2375	2361	2323	2240	2178	1090
35°	1927	1913	1820	1682	1641	1205
45°	1479	1448	1324	1213	1165	1139
55°	1027	996	903	796	755	921
65°	610	576	520	531	441	601
75°	245	228	214	203	224	262
85°	34	38	41	45	48	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2981.4	2981.4	2981.4	2981.4	2981.4
2.5°	2960.8	2960.8	2960.8	2957.3	2957.3
5°	2929.7	2926.3	2926.3	2922.8	2922.8
7.5°	2905.6	2902.2	2898.7	2895.3	2888.4
10°	2871.1	2871.1	2867.7	2850.5	2847.0
12.5°	2816.0	2812.5	2798.8	2774.6	2767.7
15°	2740.2	2740.2	2712.6	2685.0	2674.7
17.5°	2657.4	2654.0	2619.5	2592.0	2578.2
20°	2567.8	2560.9	2526.5	2481.7	2457.5
22.5°	2467.9	2467.9	2426.5	2367.9	2343.8
25°	2374.8	2361.0	2323.1	2240.4	2178.3
27.5°	2268.0	2247.3	2205.9	2088.7	2016.3
30°	2150.8	2140.4	2081.8	1930.2	1875.0
32.5°	2040.5	2023.2	1961.2	1802.7	1757.8
35°	1926.7	1912.9	1819.9	1682.0	1640.7
37.5°	1813.0	1795.8	1678.6	1568.3	1516.6
40°	1699.2	1678.6	1551.0	1451.1	1395.9
42.5°	1592.4	1564.8	1440.7	1333.9	1271.9
45°	1478.7	1447.6	1323.6	1213.3	1165.0
47.5°	1364.9	1337.3	1223.6	1109.9	1054.7
50°	1244.3	1220.2	1116.7	1003.0	944.4
52.5°	1144.3	1106.4	1006.5	892.7	844.5
55°	1027.1	996.1	903.0	796.2	754.8
57.5°	920.3	889.3	803.1	703.1	668.7
60°	820.3	775.5	703.1	617.0	589.4
62.5°	710.0	675.6	613.5	541.1	575.6
65°	610.1	575.6	520.5	530.8	441.2
67.5°	499.8	482.5	434.3	386.0	372.2
70°	406.7	386.0	368.8	317.1	303.3
72.5°	324.0	303.3	279.2	251.6	241.3
75°	244.7	227.5	213.7	203.4	224.0
77.5°	168.9	162.0	151.7	141.3	137.9
80°	110.3	106.8	103.4	100.0	96.5
82.5°	65.5	65.5	65.5	65.5	65.5
85°	34.5	37.9	41.4	44.8	48.3
87.5°	20.7	20.7	24.1	27.6	31.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)