

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: P562796

Luminaire Tested: FSR-24-4-LD4-2LO-40-UNV-93-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562796
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-40-UNV-93-96-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4912.0 lumens
Efficiency: N/A
Efficacy: 105.0 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

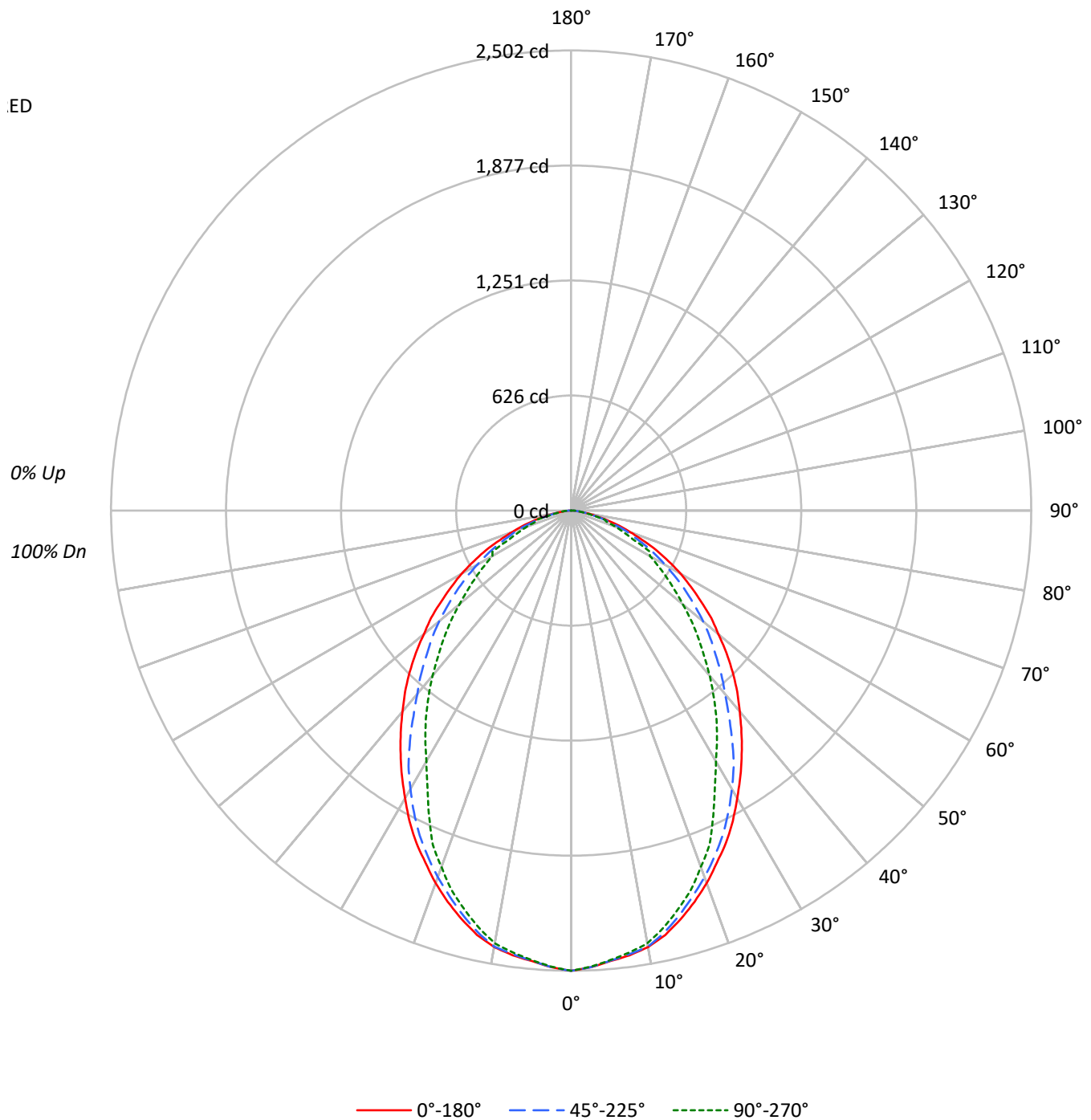
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3367	3367	3367
5°	3321	3317	3313
10°	3292	3288	3264
15°	3203	3171	3127
20°	3086	3036	2953
25°	2959	2894	2714
30°	2804	2714	2445
35°	2656	2509	2262
40°	2505	2286	2058
45°	2361	2114	1860
50°	2186	1962	1659
55°	2022	1778	1486
60°	1852	1588	1331
65°	1630	1391	1179
70°	1343	1218	1001
75°	1068	932	977
80°	717	673	628
85°	446	536	625

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2361 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	232.9	4.7
10°-20°	639.2	13.0
20°-30°	884.9	18.0
30°-40°	943.6	19.2
40°-50°	860.8	17.5
50°-60°	674.4	13.7
60°-70°	439.6	8.9
70°-80°	194.7	4.0
80°-90°	41.8	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°	1757.1	35.8
0°-40°	2700.7	55.0
0°-60°	4235.9	86.2
0°-90°	4912.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4912.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2502	2502	2502	2502	2502	
5°	2459	2456	2456	2453	2453	233
15°	2300	2300	2276	2253	2245	646
25°	1993	1981	1950	1880	1828	915
35°	1617	1605	1527	1412	1377	1011
45°	1241	1215	1111	1018	978	956
55°	862	836	758	668	634	773
65°	512	483	437	446	370	505
75°	205	191	179	171	188	220
85°	29	32	35	38	40	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2502.1	2502.1	2502.1	2502.1	2502.1
2.5°	2484.8	2484.8	2484.8	2481.9	2481.9
5°	2458.7	2455.8	2455.8	2452.9	2452.9
7.5°	2438.5	2435.6	2432.7	2429.8	2424.0
10°	2409.5	2409.5	2406.7	2392.2	2389.3
12.5°	2363.3	2360.4	2348.8	2328.6	2322.8
15°	2299.6	2299.6	2276.5	2253.3	2244.7
17.5°	2230.2	2227.3	2198.4	2175.2	2163.7
20°	2155.0	2149.2	2120.3	2082.7	2062.4
22.5°	2071.1	2071.1	2036.4	1987.2	1967.0
25°	1993.0	1981.4	1949.6	1880.2	1828.1
27.5°	1903.3	1886.0	1851.3	1752.9	1692.2
30°	1805.0	1796.3	1747.1	1619.9	1573.6
32.5°	1712.4	1698.0	1645.9	1512.8	1475.2
35°	1617.0	1605.4	1527.3	1411.6	1376.9
37.5°	1521.5	1507.0	1408.7	1316.1	1272.7
40°	1426.1	1408.7	1301.7	1217.8	1171.5
42.5°	1336.4	1313.2	1209.1	1119.4	1067.4
45°	1240.9	1214.9	1110.8	1018.2	977.7
47.5°	1145.5	1122.3	1026.9	931.4	885.1
50°	1044.2	1024.0	937.2	841.7	792.6
52.5°	960.3	928.5	844.6	749.2	708.7
55°	862.0	836.0	757.9	668.2	633.5
57.5°	772.3	746.3	674.0	590.1	561.2
60°	688.4	650.8	590.1	517.8	494.6
62.5°	595.9	567.0	514.9	454.1	483.1
65°	512.0	483.1	436.8	445.5	370.3
67.5°	419.4	405.0	364.5	324.0	312.4
70°	341.3	324.0	309.5	266.1	254.5
72.5°	271.9	254.5	234.3	211.2	202.5
75°	205.4	190.9	179.3	170.7	188.0
77.5°	141.7	136.0	127.3	118.6	115.7
80°	92.6	89.7	86.8	83.9	81.0
82.5°	55.0	55.0	55.0	55.0	55.0
85°	28.9	31.8	34.7	37.6	40.5
87.5°	17.4	17.4	20.2	23.1	26.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)