

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: P562625

Luminaire Tested: FSR-24-4-LD4-2HI-50-UNV-81-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562625
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-LD4-2HI-50-UNV-81-84-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9341.0 lumens
Efficiency: N/A
Efficacy: 108.1 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

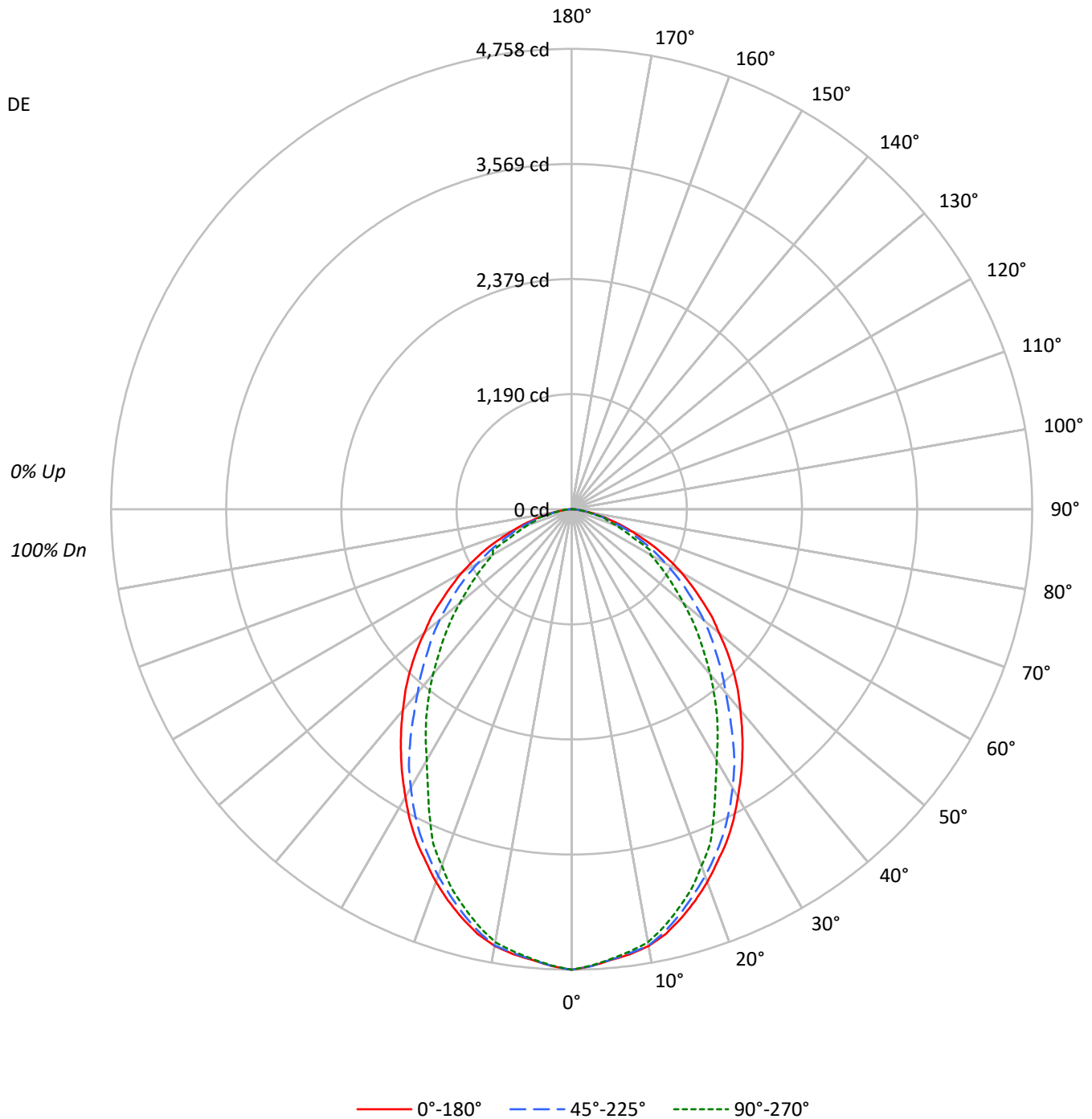
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6402	6402	6402
5°	6315	6308	6300
10°	6260	6253	6208
15°	6092	6030	5946
20°	5868	5773	5616
25°	5627	5504	5161
30°	5333	5162	4649
35°	5051	4771	4301
40°	4763	4348	3913
45°	4490	4019	3538
50°	4157	3731	3155
55°	3845	3381	2826
60°	3523	3020	2531
65°	3100	2644	2242
70°	2554	2316	1904
75°	2031	1773	1859
80°	1364	1278	1193
85°	849	1019	1189

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4490 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	442.9	4.7
10°-20°	1215.6	13.0
20°-30°	1682.9	18.0
30°-40°	1794.4	19.2
40°-50°	1637.0	17.5
50°-60°	1282.5	13.7
60°-70°	835.9	8.9
70°-80°	370.3	4.0
80°-90°	79.5	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°	3341.4	35.8
0°-40°	5135.8	55.0
0°-60°	8055.3	86.2
0°-90°	9341.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9341.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4758	4758	4758	4758	4758	
5°	4676	4670	4670	4665	4665	444
15°	4373	4373	4329	4285	4269	1229
25°	3790	3768	3708	3576	3476	1740
35°	3075	3053	2904	2684	2618	1922
45°	2360	2310	2112	1936	1859	1818
55°	1639	1590	1441	1271	1205	1470
65°	974	919	831	847	704	960
75°	391	363	341	324	358	419
85°	55	60	66	72	77	76
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4758.2	4758.2	4758.2	4758.2	4758.2
2.5°	4725.2	4725.2	4725.2	4719.7	4719.7
5°	4675.7	4670.2	4670.2	4664.7	4664.7
7.5°	4637.2	4631.7	4626.2	4620.7	4609.7
10°	4582.2	4582.2	4576.7	4549.2	4543.6
12.5°	4494.1	4488.6	4466.6	4428.1	4417.1
15°	4373.1	4373.1	4329.1	4285.1	4268.6
17.5°	4241.1	4235.6	4180.6	4136.6	4114.6
20°	4098.1	4087.1	4032.1	3960.6	3922.1
22.5°	3938.6	3938.6	3872.6	3779.0	3740.5
25°	3790.0	3768.0	3707.5	3575.5	3476.5
27.5°	3619.5	3586.5	3520.5	3333.5	3218.0
30°	3432.5	3416.0	3322.5	3080.4	2992.4
32.5°	3256.5	3229.0	3129.9	2876.9	2805.4
35°	3074.9	3052.9	2904.4	2684.4	2618.4
37.5°	2893.4	2865.9	2678.9	2502.9	2420.3
40°	2711.9	2678.9	2475.4	2315.8	2227.8
42.5°	2541.4	2497.4	2299.3	2128.8	2029.8
45°	2359.8	2310.3	2112.3	1936.3	1859.3
47.5°	2178.3	2134.3	1952.8	1771.3	1683.2
50°	1985.8	1947.3	1782.3	1600.7	1507.2
52.5°	1826.3	1765.8	1606.2	1424.7	1347.7
55°	1639.2	1589.7	1441.2	1270.7	1204.7
57.5°	1468.7	1419.2	1281.7	1122.2	1067.2
60°	1309.2	1237.7	1122.2	984.6	940.6
62.5°	1133.2	1078.2	979.1	863.6	918.6
65°	973.6	918.6	830.6	847.1	704.1
67.5°	797.6	770.1	693.1	616.1	594.1
70°	649.1	616.1	588.6	506.1	484.1
72.5°	517.1	484.1	445.6	401.6	385.1
75°	390.6	363.1	341.0	324.5	357.6
77.5°	269.5	258.5	242.0	225.5	220.0
80°	176.0	170.5	165.0	159.5	154.0
82.5°	104.5	104.5	104.5	104.5	104.5
85°	55.0	60.5	66.0	71.5	77.0
87.5°	33.0	33.0	38.5	44.0	49.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)