

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: P563866

Luminaire Tested: FSR-24-4-LD4-4LO-35-UNV-82-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563866
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-LD4-4LO-35-UNV-82-94-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9092.0 lumens
Efficiency: N/A
Efficacy: 97.1 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

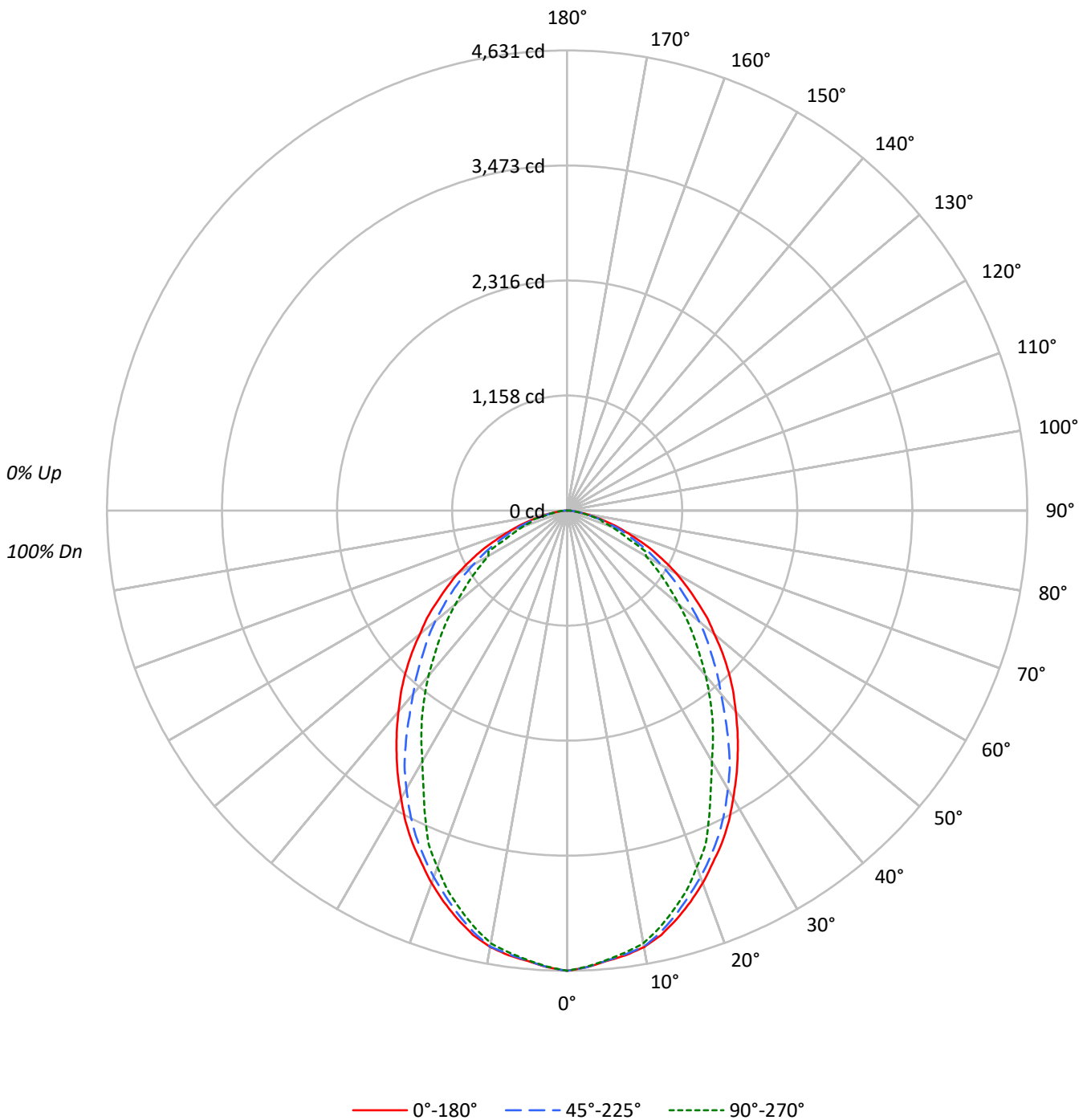
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6231	6231	6231
5°	6147	6140	6132
10°	6093	6086	6042
15°	5929	5869	5787
20°	5711	5619	5466
25°	5477	5357	5024
30°	5191	5024	4525
35°	4916	4643	4186
40°	4636	4232	3809
45°	4371	3912	3444
50°	4046	3631	3071
55°	3743	3291	2751
60°	3429	2939	2464
65°	3017	2574	2182
70°	2485	2254	1854
75°	1976	1726	1809
80°	1327	1244	1161
85°	826	991	1158

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4371 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	431.1	4.7
10°-20°	1183.2	13.0
20°-30°	1638.0	18.0
30°-40°	1746.6	19.2
40°-50°	1593.4	17.5
50°-60°	1248.3	13.7
60°-70°	813.6	8.9
70°-80°	360.5	4.0
80°-90°	77.4	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°	3252.3	35.8
0°-40°	4998.9	55.0
0°-60°	7840.6	86.2
0°-90°	9092.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9092.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4631	4631	4631	4631	4631	
5°	4551	4546	4546	4540	4540	432
15°	4257	4257	4214	4171	4155	1197
25°	3689	3668	3609	3480	3384	1694
35°	2993	2972	2827	2613	2549	1871
45°	2297	2249	2056	1885	1810	1769
55°	1596	1547	1403	1237	1173	1431
65°	948	894	808	824	685	934
75°	380	353	332	316	348	407
85°	54	59	64	70	75	74
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4631.3	4631.3	4631.3	4631.3	4631.3
2.5°	4599.2	4599.2	4599.2	4593.9	4593.9
5°	4551.0	4545.7	4545.7	4540.3	4540.3
7.5°	4513.6	4508.2	4502.8	4497.5	4486.8
10°	4460.0	4460.0	4454.7	4427.9	4422.5
12.5°	4374.3	4369.0	4347.6	4310.1	4299.4
15°	4256.6	4256.6	4213.7	4170.9	4154.8
17.5°	4128.1	4122.7	4069.2	4026.3	4004.9
20°	3988.8	3978.1	3924.6	3855.0	3817.5
22.5°	3833.6	3833.6	3769.3	3678.3	3640.8
25°	3689.0	3667.6	3608.7	3480.2	3383.8
27.5°	3523.0	3490.9	3426.7	3244.6	3132.2
30°	3341.0	3324.9	3233.9	2998.3	2912.7
32.5°	3169.7	3142.9	3046.5	2800.2	2730.6
35°	2993.0	2971.6	2827.0	2612.8	2548.6
37.5°	2816.3	2789.5	2607.5	2436.1	2355.8
40°	2639.6	2607.5	2409.4	2254.1	2168.4
42.5°	2473.6	2430.8	2238.0	2072.1	1975.7
45°	2296.9	2248.7	2056.0	1884.7	1809.7
47.5°	2120.2	2077.4	1900.7	1724.0	1638.4
50°	1932.8	1895.4	1734.7	1558.1	1467.0
52.5°	1777.6	1718.7	1563.4	1386.7	1311.8
55°	1595.5	1547.4	1402.8	1236.8	1172.6
57.5°	1429.6	1381.4	1247.5	1092.2	1038.7
60°	1274.3	1204.7	1092.2	958.4	915.6
62.5°	1103.0	1049.4	953.0	840.6	894.1
65°	947.7	894.1	808.5	824.5	685.3
67.5°	776.4	749.6	674.6	599.7	578.2
70°	631.8	599.7	572.9	492.6	471.2
72.5°	503.3	471.2	433.7	390.9	374.8
75°	380.1	353.4	332.0	315.9	348.0
77.5°	262.4	251.6	235.6	219.5	214.2
80°	171.3	166.0	160.6	155.3	149.9
82.5°	101.7	101.7	101.7	101.7	101.7
85°	53.5	58.9	64.2	69.6	75.0
87.5°	32.1	32.1	37.5	42.8	48.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)