

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: P562881

Luminaire Tested: FSR-24-4-LD4-2STD-35-UNV-81-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562881
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-81-84-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7414.0 lumens
Efficiency: N/A
Efficacy: 111.3 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

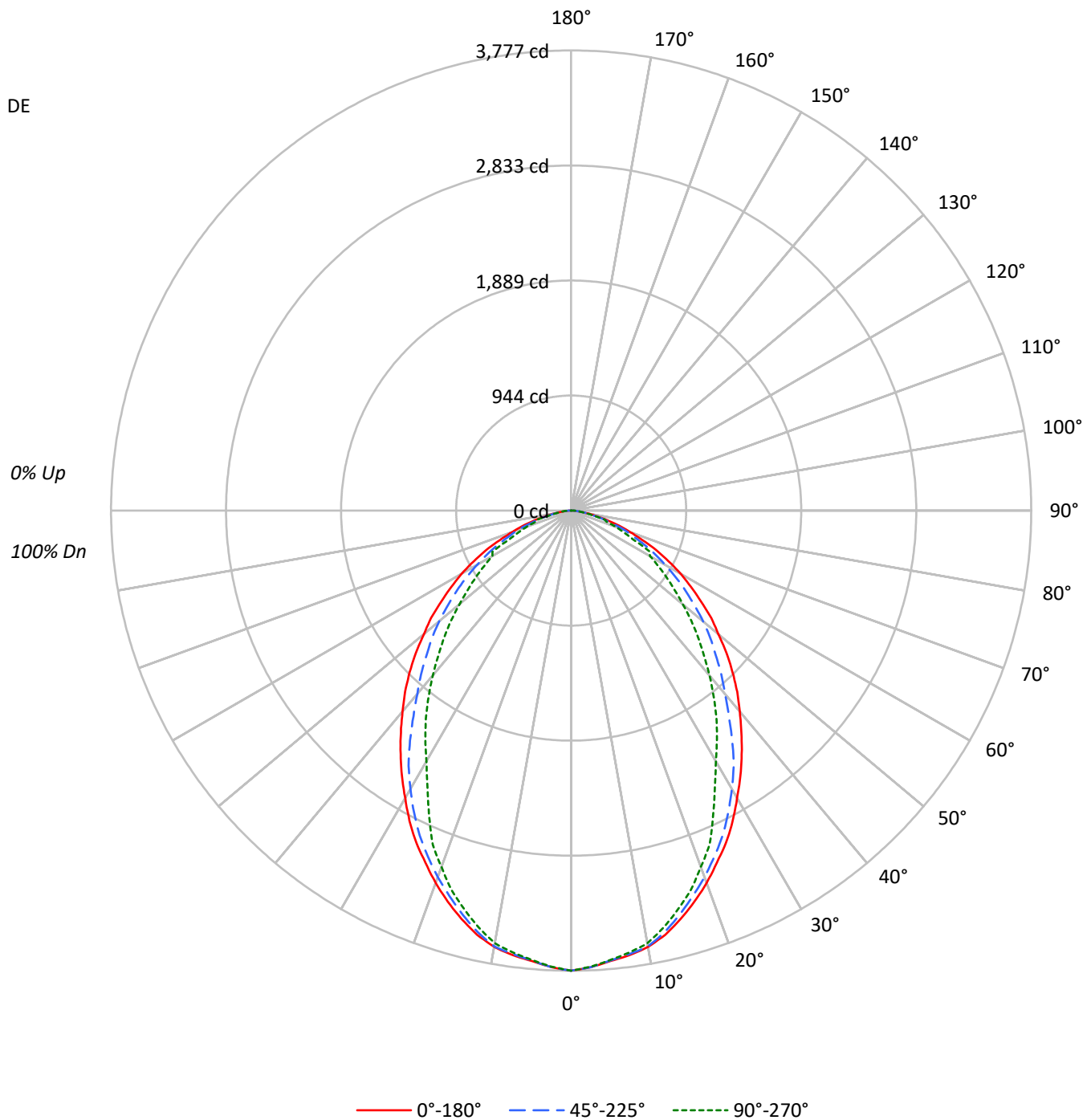
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5081	5081	5081
5°	5012	5006	5001
10°	4969	4963	4927
15°	4835	4786	4719
20°	4657	4582	4457
25°	4466	4369	4096
30°	4233	4097	3690
35°	4009	3786	3414
40°	3781	3451	3106
45°	3564	3190	2808
50°	3299	2961	2504
55°	3052	2683	2243
60°	2796	2397	2009
65°	2460	2099	1779
70°	2027	1838	1511
75°	1612	1407	1475
80°	1082	1015	947
85°	675	809	943

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3564 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	351.5	4.7
10°-20°	964.8	13.0
20°-30°	1335.7	18.0
30°-40°	1424.2	19.2
40°-50°	1299.3	17.5
50°-60°	1017.9	13.7
60°-70°	663.4	8.9
70°-80°	293.9	4.0
80°-90°	63.1	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°	2652.0	35.8
0°-40°	4076.3	55.0
0°-60°	6393.5	86.2
0°-90°	7414.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7414.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3777	3777	3777	3777	3777	
5°	3711	3707	3707	3702	3702	352
15°	3471	3471	3436	3401	3388	976
25°	3008	2991	2943	2838	2759	1381
35°	2441	2423	2305	2131	2078	1526
45°	1873	1834	1676	1537	1476	1443
55°	1301	1262	1144	1008	956	1167
65°	773	729	659	672	559	762
75°	310	288	271	258	284	332
85°	44	48	52	57	61	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3776.6	3776.6	3776.6	3776.6	3776.6
2.5°	3750.4	3750.4	3750.4	3746.0	3746.0
5°	3711.1	3706.7	3706.7	3702.4	3702.4
7.5°	3680.5	3676.2	3671.8	3667.4	3658.7
10°	3636.9	3636.9	3632.5	3610.7	3606.3
12.5°	3567.0	3562.7	3545.2	3514.6	3505.9
15°	3471.0	3471.0	3436.0	3401.1	3388.0
17.5°	3366.2	3361.8	3318.2	3283.2	3265.8
20°	3252.7	3243.9	3200.3	3143.5	3113.0
22.5°	3126.1	3126.1	3073.7	2999.4	2968.9
25°	3008.2	2990.7	2942.7	2837.9	2759.3
27.5°	2872.8	2846.6	2794.2	2645.8	2554.1
30°	2724.4	2711.3	2637.1	2445.0	2375.1
32.5°	2584.7	2562.8	2484.3	2283.4	2226.7
35°	2440.6	2423.1	2305.2	2130.6	2078.2
37.5°	2296.5	2274.7	2126.2	1986.5	1921.0
40°	2152.4	2126.2	1964.7	1838.1	1768.2
42.5°	2017.1	1982.2	1825.0	1689.6	1611.1
45°	1873.0	1833.7	1676.5	1536.8	1475.7
47.5°	1728.9	1694.0	1549.9	1405.9	1336.0
50°	1576.1	1545.6	1414.6	1270.5	1196.3
52.5°	1449.5	1401.5	1274.9	1130.8	1069.7
55°	1301.1	1261.8	1143.9	1008.5	956.2
57.5°	1165.7	1126.4	1017.3	890.7	847.0
60°	1039.1	982.4	890.7	781.5	746.6
62.5°	899.4	855.7	777.1	685.5	729.1
65°	772.8	729.1	659.3	672.4	558.8
67.5°	633.1	611.2	550.1	489.0	471.5
70°	515.2	489.0	467.2	401.7	384.2
72.5°	410.4	384.2	353.6	318.7	305.6
75°	310.0	288.2	270.7	257.6	283.8
77.5°	213.9	205.2	192.1	179.0	174.6
80°	139.7	135.3	131.0	126.6	122.2
82.5°	83.0	83.0	83.0	83.0	83.0
85°	43.7	48.0	52.4	56.8	61.1
87.5°	26.2	26.2	30.6	34.9	39.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)