

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: P562893

Luminaire Tested: FSR-24-4-LD4-2STD-35-UNV-81-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562893
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-81-96-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7350.0 lumens
Efficiency: N/A
Efficacy: 110.4 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

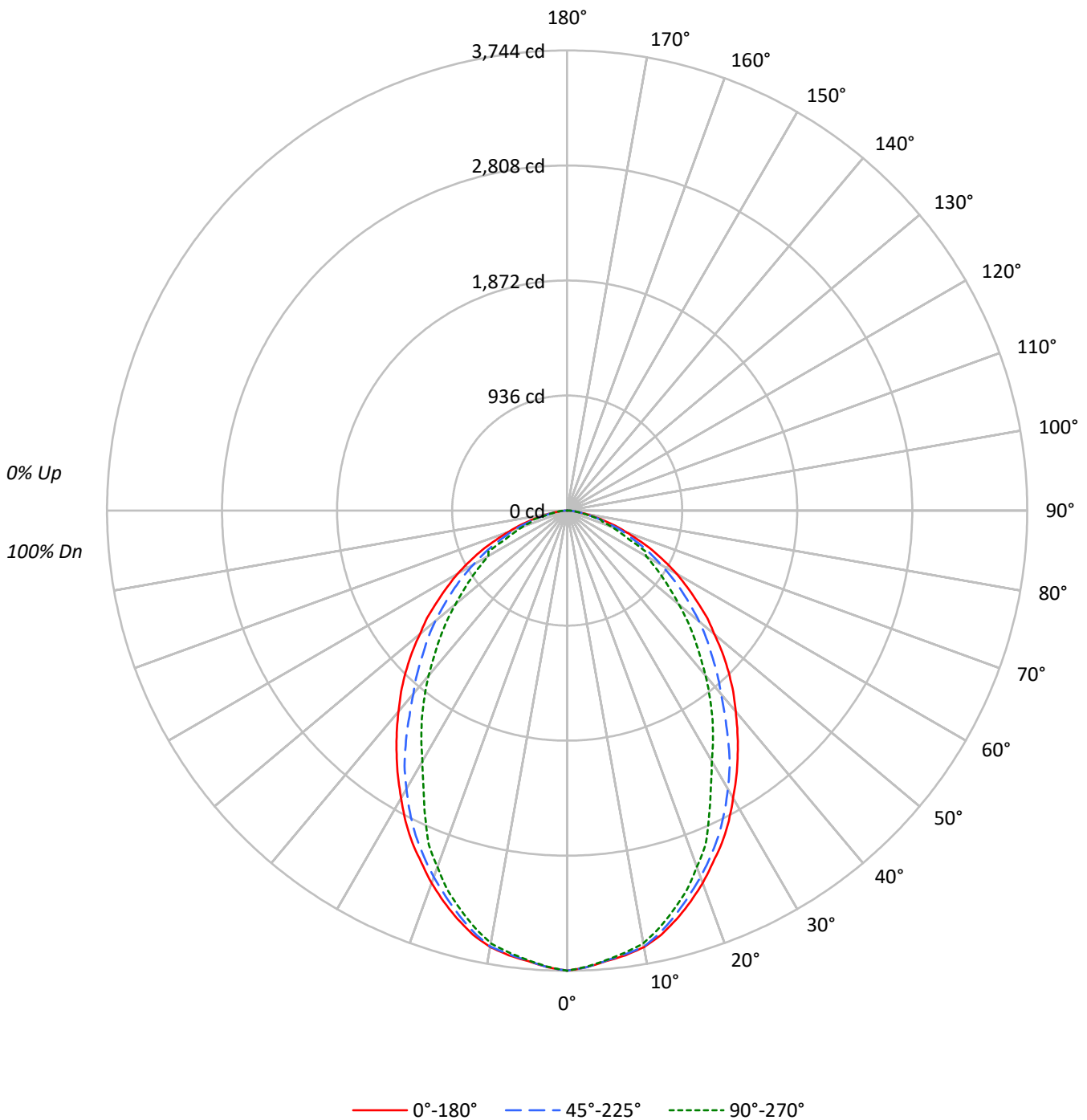
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5038	5038	5038
5°	4969	4963	4957
10°	4926	4920	4885
15°	4793	4745	4679
20°	4617	4543	4419
25°	4427	4331	4061
30°	4196	4062	3658
35°	3974	3754	3384
40°	3748	3421	3079
45°	3533	3163	2784
50°	3271	2936	2483
55°	3026	2660	2224
60°	2772	2376	1992
65°	2439	2081	1764
70°	2009	1822	1498
75°	1598	1395	1462
80°	1073	1006	939
85°	668	801	936

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3533 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	348.5	4.7
10°-20°	956.5	13.0
20°-30°	1324.2	18.0
30°-40°	1412.0	19.2
40°-50°	1288.1	17.5
50°-60°	1009.1	13.7
60°-70°	657.7	8.9
70°-80°	291.4	4.0
80°-90°	62.6	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°	2629.2	35.8
0°-40°	4041.1	55.0
0°-60°	6338.4	86.2
0°-90°	7350.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7350.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3744	3744	3744	3744	3744	
5°	3679	3675	3675	3670	3670	349
15°	3441	3441	3406	3372	3359	967
25°	2982	2965	2917	2813	2736	1369
35°	2420	2402	2285	2112	2060	1513
45°	1857	1818	1662	1524	1463	1430
55°	1290	1251	1134	1000	948	1157
65°	766	723	654	667	554	755
75°	307	286	268	255	281	329
85°	43	48	52	56	61	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3744.0	3744.0	3744.0	3744.0	3744.0
2.5°	3718.0	3718.0	3718.0	3713.7	3713.7
5°	3679.1	3674.7	3674.7	3670.4	3670.4
7.5°	3648.8	3644.4	3640.1	3635.8	3627.1
10°	3605.5	3605.5	3601.2	3579.5	3575.2
12.5°	3536.2	3531.9	3514.6	3484.3	3475.6
15°	3441.0	3441.0	3406.4	3371.8	3358.8
17.5°	3337.1	3332.8	3289.5	3254.9	3237.6
20°	3224.6	3215.9	3172.7	3116.4	3086.1
22.5°	3099.1	3099.1	3047.1	2973.6	2943.3
25°	2982.2	2964.9	2917.3	2813.4	2735.5
27.5°	2848.0	2822.1	2770.1	2623.0	2532.1
30°	2700.9	2687.9	2614.3	2423.9	2354.6
32.5°	2562.4	2540.7	2462.8	2263.7	2207.4
35°	2419.5	2402.2	2285.3	2112.2	2060.3
37.5°	2276.7	2255.1	2107.9	1969.4	1904.5
40°	2133.9	2107.9	1947.7	1822.2	1753.0
42.5°	1999.7	1965.1	1809.2	1675.1	1597.1
45°	1856.8	1817.9	1662.1	1523.6	1463.0
47.5°	1714.0	1679.4	1536.6	1393.7	1324.5
50°	1562.5	1532.2	1402.4	1259.5	1186.0
52.5°	1437.0	1389.4	1263.9	1121.0	1060.4
55°	1289.8	1250.9	1134.0	999.8	947.9
57.5°	1155.7	1116.7	1008.5	883.0	839.7
60°	1030.1	973.9	883.0	774.8	740.1
62.5°	891.6	848.3	770.4	679.5	722.8
65°	766.1	722.8	653.6	666.6	554.0
67.5°	627.6	606.0	545.4	484.8	467.5
70°	510.7	484.8	463.1	398.2	380.9
72.5°	406.9	380.9	350.6	316.0	303.0
75°	307.3	285.7	268.4	255.4	281.3
77.5°	212.1	203.4	190.4	177.5	173.1
80°	138.5	134.2	129.8	125.5	121.2
82.5°	82.2	82.2	82.2	82.2	82.2
85°	43.3	47.6	51.9	56.3	60.6
87.5°	26.0	26.0	30.3	34.6	39.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)