

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: P563308

Luminaire Tested: FSR-24-4-LD4-3LO-35-UNV-93-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563308
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-LD4-3LO-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7265.0 lumens
Efficiency: N/A
Efficacy: 103.5 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

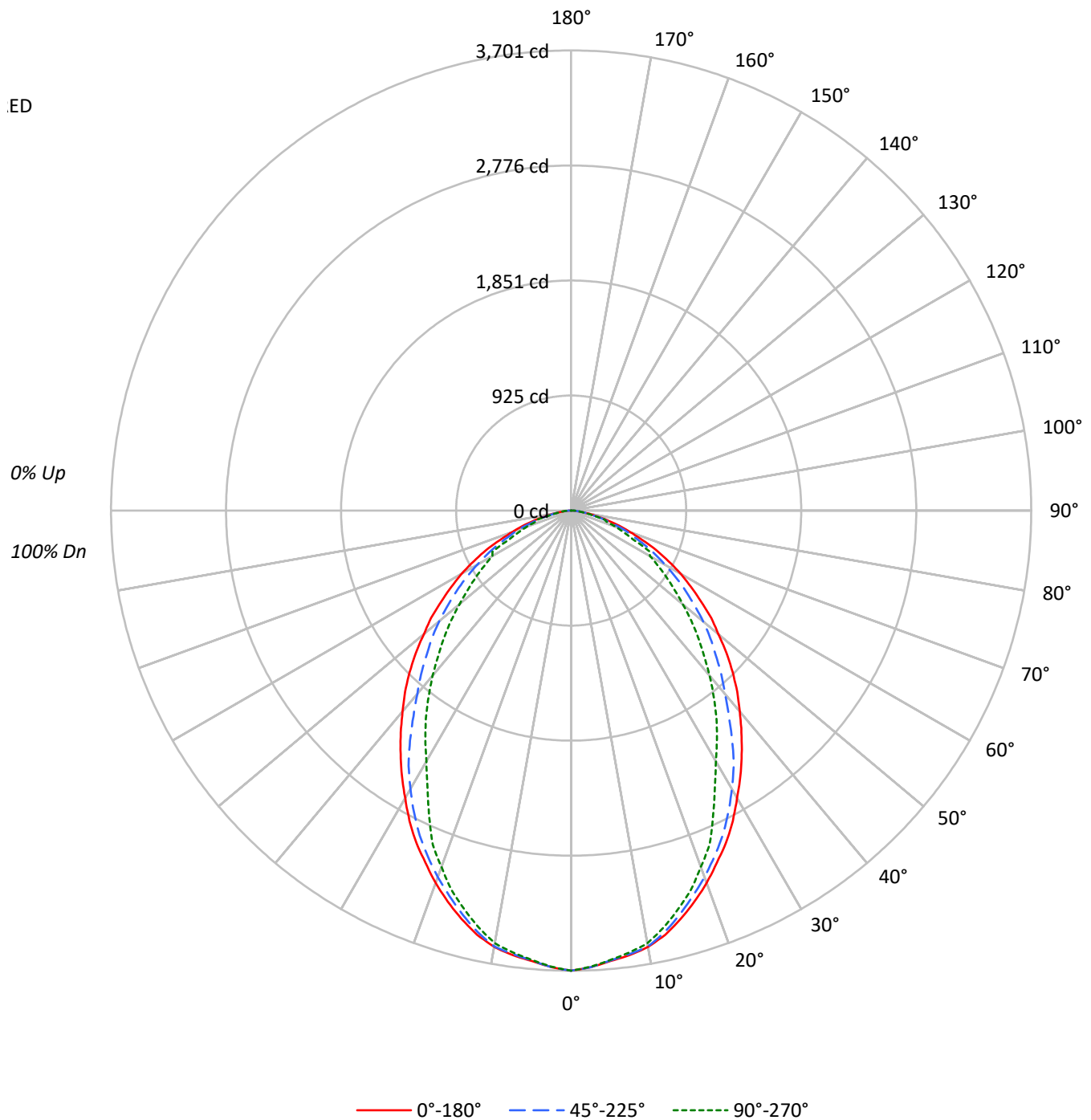
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4979	4979	4979
5°	4912	4906	4900
10°	4869	4863	4828
15°	4738	4690	4624
20°	4564	4490	4368
25°	4376	4281	4014
30°	4148	4015	3616
35°	3928	3710	3345
40°	3705	3381	3043
45°	3492	3126	2752
50°	3233	2902	2454
55°	2991	2629	2198
60°	2740	2349	1969
65°	2411	2057	1743
70°	1986	1801	1481
75°	1579	1379	1446
80°	1061	994	928
85°	661	792	925

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3492 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	344.5	4.7
10°-20°	945.4	13.0
20°-30°	1308.9	18.0
30°-40°	1395.6	19.2
40°-50°	1273.2	17.5
50°-60°	997.5	13.7
60°-70°	650.1	8.9
70°-80°	288.0	4.0
80°-90°	61.8	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°	2598.7	35.8
0°-40°	3994.4	55.0
0°-60°	6265.0	86.2
0°-90°	7265.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7265.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3701	3701	3701	3701	3701	
5°	3636	3632	3632	3628	3628	345
15°	3401	3401	3367	3333	3320	956
25°	2948	2931	2884	2781	2704	1353
35°	2392	2374	2259	2088	2036	1495
45°	1835	1797	1643	1506	1446	1414
55°	1275	1236	1121	988	937	1144
65°	757	714	646	659	548	746
75°	304	282	265	252	278	326
85°	43	47	51	56	60	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3700.7	3700.7	3700.7	3700.7	3700.7
2.5°	3675.0	3675.0	3675.0	3670.7	3670.7
5°	3636.5	3632.2	3632.2	3628.0	3628.0
7.5°	3606.6	3602.3	3598.0	3593.7	3585.2
10°	3563.8	3563.8	3559.5	3538.1	3533.8
12.5°	3495.3	3491.1	3473.9	3444.0	3435.4
15°	3401.2	3401.2	3367.0	3332.8	3319.9
17.5°	3298.5	3294.3	3251.5	3217.3	3200.1
20°	3187.3	3178.7	3136.0	3080.3	3050.4
22.5°	3063.2	3063.2	3011.9	2939.2	2909.2
25°	2947.7	2930.6	2883.5	2780.9	2703.9
27.5°	2815.1	2789.4	2738.1	2592.6	2502.8
30°	2669.6	2656.8	2584.1	2395.8	2327.4
32.5°	2532.7	2511.3	2434.3	2237.5	2181.9
35°	2391.5	2374.4	2258.9	2087.8	2036.5
37.5°	2250.4	2229.0	2083.5	1946.6	1882.4
40°	2109.2	2083.5	1925.2	1801.1	1732.7
42.5°	1976.6	1942.3	1788.3	1655.7	1578.7
45°	1835.4	1796.9	1642.9	1505.9	1446.1
47.5°	1694.2	1660.0	1518.8	1377.6	1309.1
50°	1544.5	1514.5	1386.2	1245.0	1172.2
52.5°	1420.4	1373.3	1249.3	1108.1	1048.2
55°	1274.9	1236.4	1120.9	988.3	936.9
57.5°	1142.3	1103.8	996.8	872.8	830.0
60°	1018.2	962.6	872.8	765.8	731.6
62.5°	881.3	838.5	761.5	671.7	714.5
65°	757.3	714.5	646.0	658.9	547.6
67.5°	620.3	599.0	539.1	479.2	462.1
70°	504.8	479.2	457.8	393.6	376.5
72.5°	402.2	376.5	346.5	312.3	299.5
75°	303.8	282.4	265.3	252.4	278.1
77.5°	209.6	201.1	188.2	175.4	171.1
80°	136.9	132.6	128.3	124.1	119.8
82.5°	81.3	81.3	81.3	81.3	81.3
85°	42.8	47.1	51.3	55.6	59.9
87.5°	25.7	25.7	29.9	34.2	38.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)