

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: P563305

Luminaire Tested: FSR-24-4-LD4-3LO-35-UNV-93-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563305
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-93-88-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7396.0 lumens
Efficiency: N/A
Efficacy: 105.4 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

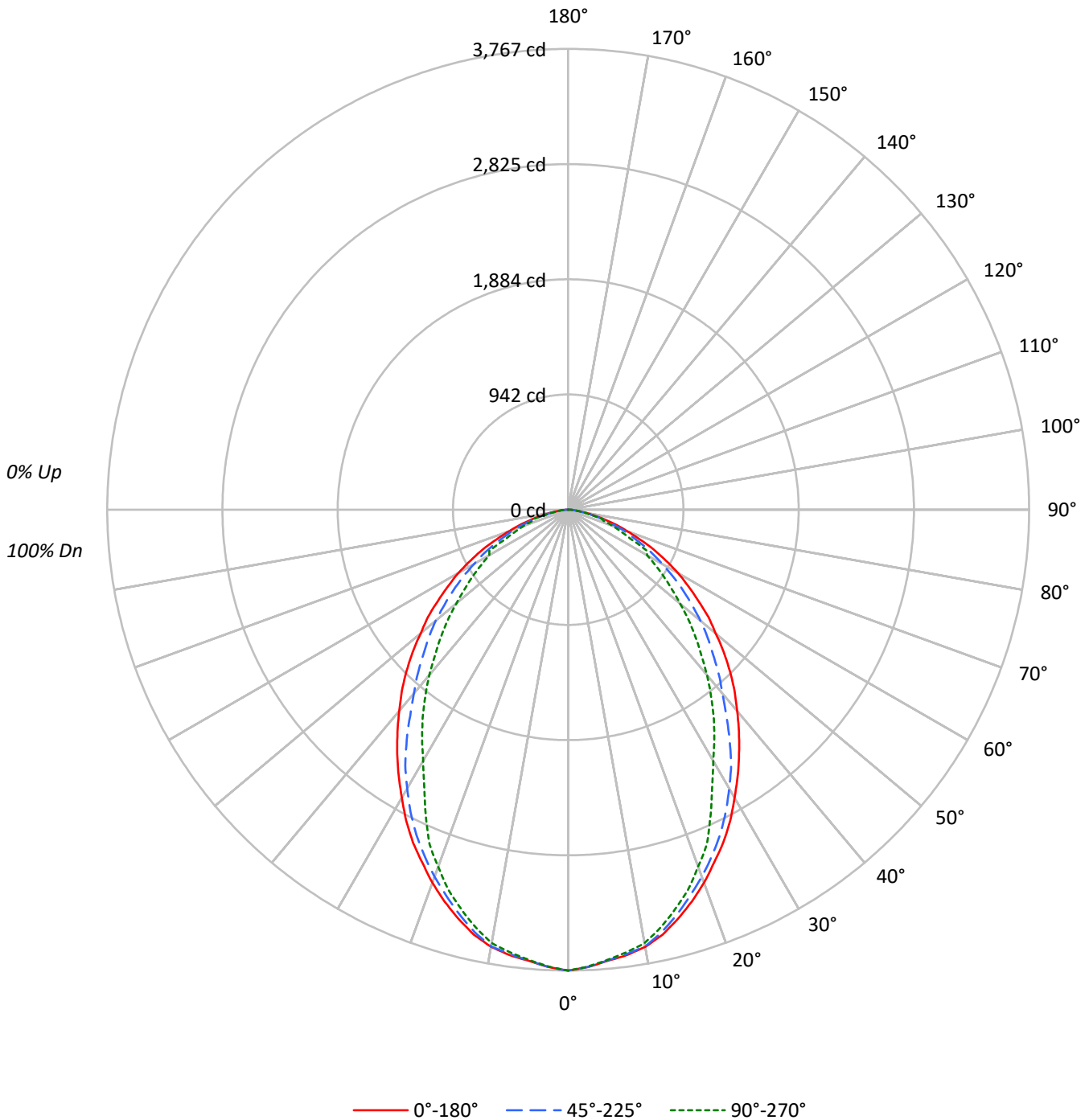
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5069	5069	5069
5°	5000	4994	4988
10°	4957	4951	4915
15°	4823	4775	4708
20°	4646	4571	4446
25°	4455	4358	4086
30°	4222	4087	3681
35°	3999	3777	3405
40°	3771	3442	3098
45°	3555	3182	2801
50°	3291	2954	2498
55°	3045	2677	2237
60°	2789	2391	2004
65°	2454	2094	1775
70°	2022	1833	1508
75°	1607	1404	1472
80°	1080	1013	945
85°	673	807	942

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3555 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	350.7	4.7
10°-20°	962.5	13.0
20°-30°	1332.5	18.0
30°-40°	1420.8	19.2
40°-50°	1296.2	17.5
50°-60°	1015.4	13.7
60°-70°	661.8	8.9
70°-80°	293.2	4.0
80°-90°	63.0	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°	2645.6	35.8
0°-40°	4066.4	55.0
0°-60°	6378.0	86.2
0°-90°	7396.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7396.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3767	3767	3767	3767	3767	
5°	3702	3698	3698	3693	3693	351
15°	3462	3462	3428	3393	3380	973
25°	3001	2984	2936	2831	2753	1378
35°	2435	2417	2300	2125	2073	1522
45°	1868	1829	1672	1533	1472	1439
55°	1298	1259	1141	1006	954	1164
65°	771	727	658	671	558	760
75°	309	288	270	257	283	331
85°	44	48	52	57	61	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3767.4	3767.4	3767.4	3767.4	3767.4
2.5°	3741.3	3741.3	3741.3	3736.9	3736.9
5°	3702.1	3697.7	3697.7	3693.4	3693.4
7.5°	3671.6	3667.2	3662.9	3658.5	3649.8
10°	3628.1	3628.1	3623.7	3601.9	3597.6
12.5°	3558.4	3554.0	3536.6	3506.1	3497.4
15°	3462.5	3462.5	3427.7	3392.9	3379.8
17.5°	3358.0	3353.7	3310.1	3275.3	3257.8
20°	3244.8	3236.1	3192.5	3135.9	3105.4
22.5°	3118.5	3118.5	3066.2	2992.2	2961.7
25°	3000.9	2983.5	2935.5	2831.0	2752.6
27.5°	2865.9	2839.7	2787.5	2639.4	2547.9
30°	2717.8	2704.7	2630.7	2439.0	2369.3
32.5°	2578.4	2556.6	2478.2	2277.9	2221.3
35°	2434.7	2417.2	2299.7	2125.4	2073.2
37.5°	2290.9	2269.2	2121.1	1981.7	1916.4
40°	2147.2	2121.1	1959.9	1833.6	1763.9
42.5°	2012.2	1977.4	1820.6	1685.5	1607.1
45°	1868.5	1829.3	1672.5	1533.1	1472.1
47.5°	1724.7	1689.9	1546.2	1402.4	1332.8
50°	1572.3	1541.8	1411.2	1267.4	1193.4
52.5°	1446.0	1398.1	1271.8	1128.0	1067.1
55°	1297.9	1258.7	1141.1	1006.1	953.8
57.5°	1162.9	1123.7	1014.8	888.5	844.9
60°	1036.6	980.0	888.5	779.6	744.8
62.5°	897.2	853.7	775.3	683.8	727.4
65°	770.9	727.4	657.7	670.7	557.5
67.5°	631.5	609.8	548.8	487.8	470.4
70°	513.9	487.8	466.0	400.7	383.3
72.5°	409.4	383.3	352.8	317.9	304.9
75°	309.2	287.5	270.0	257.0	283.1
77.5°	213.4	204.7	191.6	178.6	174.2
80°	139.4	135.0	130.7	126.3	122.0
82.5°	82.8	82.8	82.8	82.8	82.8
85°	43.6	47.9	52.3	56.6	61.0
87.5°	26.1	26.1	30.5	34.8	39.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)