

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: P563418

Luminaire Tested: FSR-24-4-LD4-3LO-50-UNV-82-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563418
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-50-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7282.0 lumens
Efficiency: N/A
Efficacy: 103.7 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

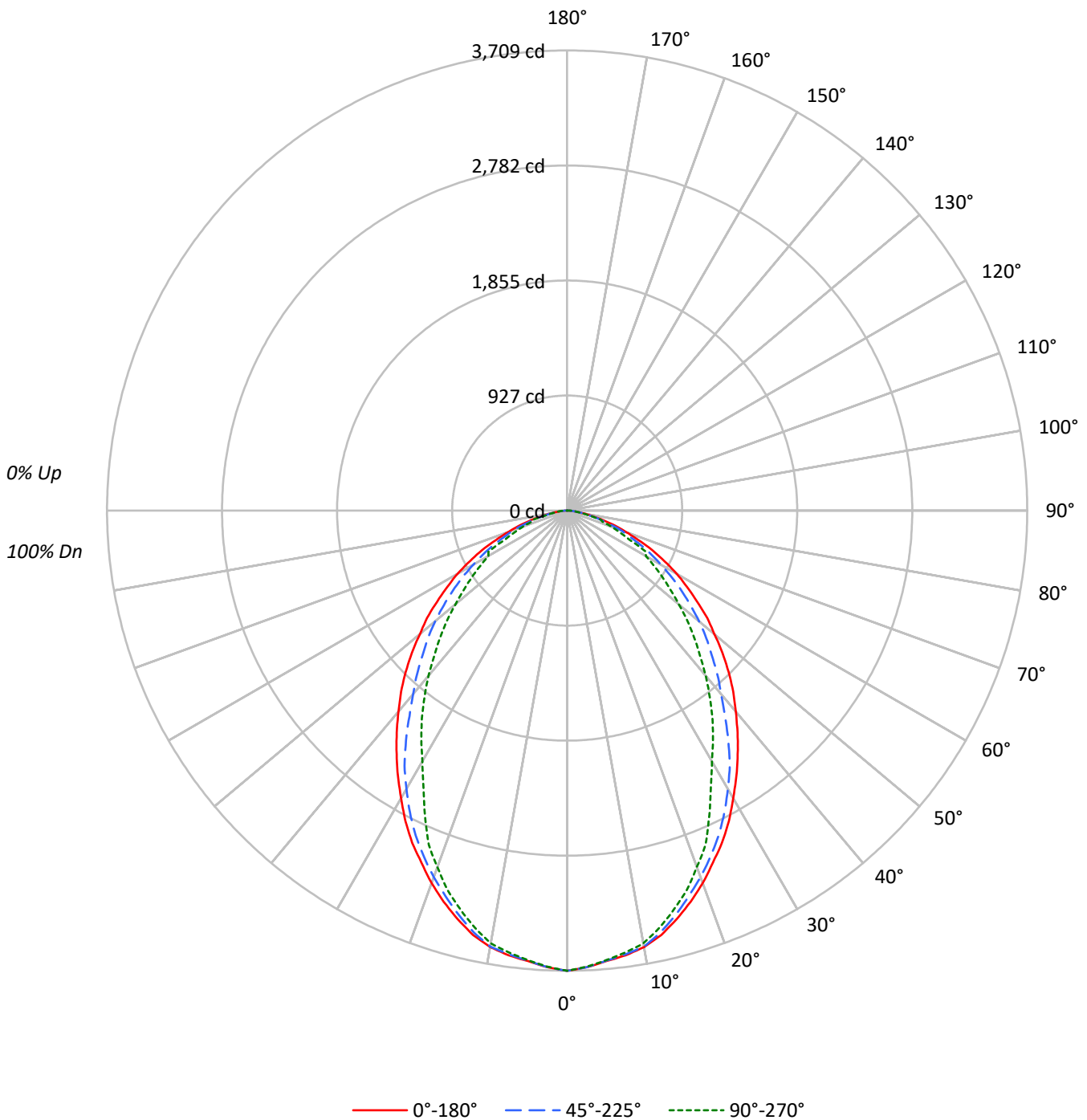
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4991	4991	4991
5°	4923	4917	4912
10°	4880	4874	4839
15°	4749	4701	4635
20°	4574	4501	4378
25°	4386	4291	4024
30°	4157	4024	3624
35°	3937	3719	3353
40°	3713	3389	3050
45°	3501	3133	2758
50°	3240	2908	2460
55°	2998	2635	2203
60°	2746	2354	1973
65°	2416	2061	1748
70°	1991	1805	1485
75°	1583	1382	1449
80°	1063	996	931
85°	662	795	926

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3501 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	345.3	4.7
10°-20°	947.6	13.0
20°-30°	1311.9	18.0
30°-40°	1398.9	19.2
40°-50°	1276.2	17.5
50°-60°	999.8	13.7
60°-70°	651.6	8.9
70°-80°	288.7	4.0
80°-90°	62.0	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°	2604.8	35.8
0°-40°	4003.7	55.0
0°-60°	6279.7	86.2
0°-90°	7282.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7282.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3709	3709	3709	3709	3709	
5°	3645	3641	3641	3636	3636	346
15°	3409	3409	3375	3341	3328	958
25°	2955	2938	2890	2787	2710	1356
35°	2397	2380	2264	2093	2041	1499
45°	1840	1801	1647	1510	1449	1417
55°	1278	1239	1124	991	939	1146
65°	759	716	648	660	549	748
75°	304	283	266	253	279	326
85°	43	47	52	56	60	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3709.4	3709.4	3709.4	3709.4	3709.4
2.5°	3683.6	3683.6	3683.6	3679.3	3679.3
5°	3645.0	3640.7	3640.7	3636.5	3636.5
7.5°	3615.0	3610.7	3606.4	3602.1	3593.6
10°	3572.1	3572.1	3567.8	3546.4	3542.1
12.5°	3503.5	3499.2	3482.1	3452.1	3443.5
15°	3409.2	3409.2	3374.9	3340.6	3327.7
17.5°	3306.3	3302.0	3259.1	3224.8	3207.6
20°	3194.8	3186.2	3143.3	3087.6	3057.5
22.5°	3070.4	3070.4	3018.9	2946.0	2916.0
25°	2954.6	2937.5	2890.3	2787.4	2710.2
27.5°	2821.7	2796.0	2744.5	2598.7	2508.6
30°	2675.9	2663.0	2590.1	2401.4	2332.8
32.5°	2538.7	2517.2	2440.0	2242.8	2187.0
35°	2397.1	2380.0	2264.2	2092.7	2041.2
37.5°	2255.6	2234.2	2088.4	1951.2	1886.8
40°	2114.1	2088.4	1929.7	1805.4	1736.7
42.5°	1981.2	1946.9	1792.5	1659.6	1582.4
45°	1839.7	1801.1	1646.7	1509.5	1449.4
47.5°	1698.2	1663.8	1522.3	1380.8	1312.2
50°	1548.1	1518.0	1389.4	1247.9	1175.0
52.5°	1423.7	1376.5	1252.2	1110.7	1050.6
55°	1277.9	1239.3	1123.5	990.6	939.1
57.5°	1145.0	1106.4	999.2	874.8	831.9
60°	1020.6	964.9	874.8	767.6	733.3
62.5°	883.4	840.5	763.3	673.3	716.1
65°	759.0	716.1	647.5	660.4	548.9
67.5°	621.8	600.4	540.3	480.3	463.1
70°	506.0	480.3	458.8	394.5	377.4
72.5°	403.1	377.4	347.3	313.0	300.2
75°	304.5	283.0	265.9	253.0	278.7
77.5°	210.1	201.5	188.7	175.8	171.5
80°	137.2	132.9	128.6	124.4	120.1
82.5°	81.5	81.5	81.5	81.5	81.5
85°	42.9	47.2	51.5	55.7	60.0
87.5°	25.7	25.7	30.0	34.3	38.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)