

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: P563357

Luminaire Tested: FSR-24-4-LD4-3LO-40-UNV-82-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563357
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-40-UNV-82-96-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8139.0 lumens
Efficiency: N/A
Efficacy: 115.9 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

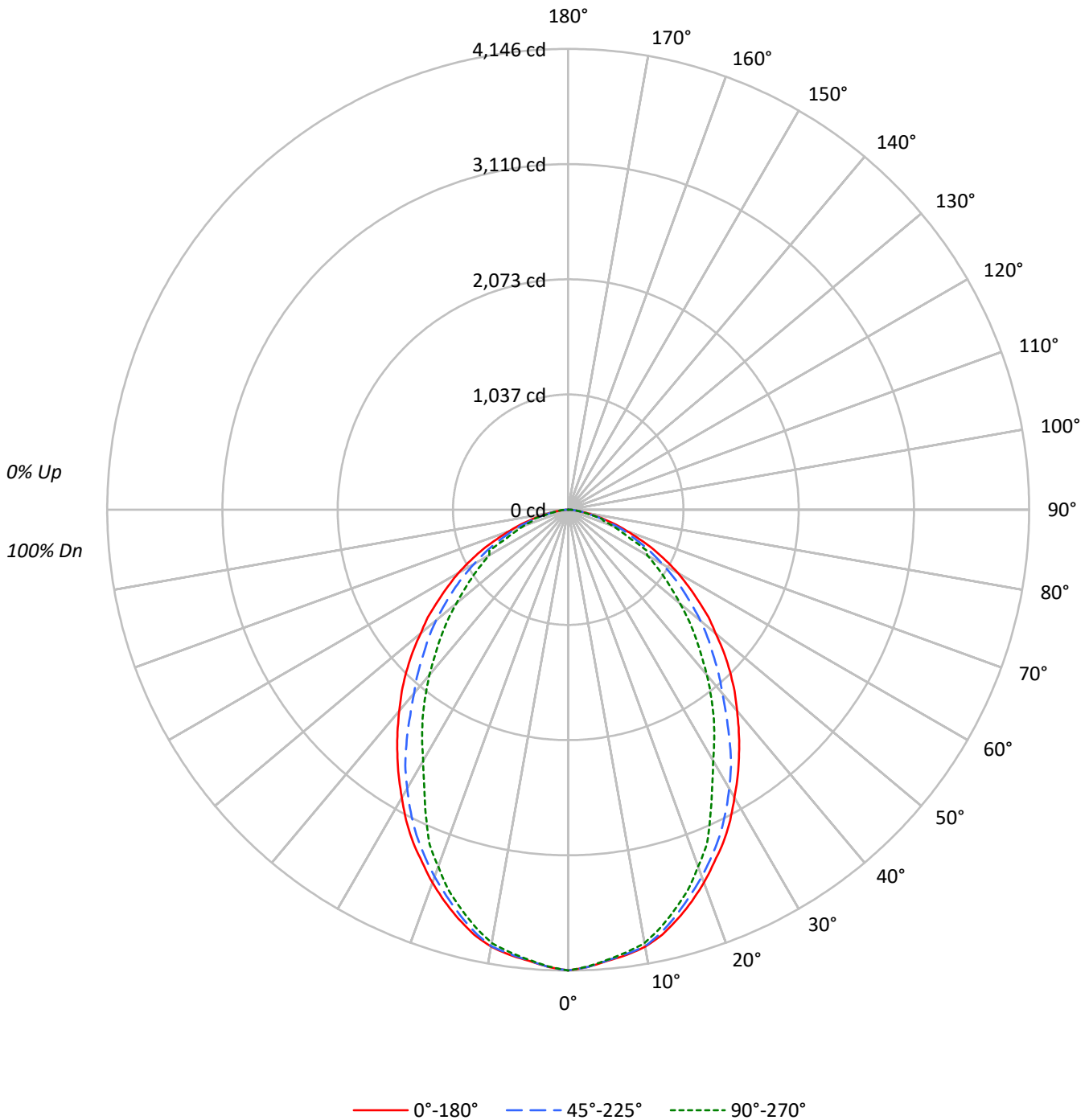
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5578	5578	5578
5°	5502	5496	5489
10°	5455	5448	5409
15°	5308	5254	5181
20°	5113	5030	4893
25°	4903	4796	4497
30°	4647	4498	4051
35°	4401	4157	3747
40°	4150	3788	3409
45°	3913	3502	3083
50°	3622	3251	2749
55°	3350	2946	2462
60°	3070	2631	2206
65°	2701	2304	1953
70°	2225	2017	1659
75°	1769	1545	1619
80°	1189	1114	1040
85°	739	888	1036

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3913 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	385.9	4.7
10°-20°	1059.1	13.0
20°-30°	1466.3	18.0
30°-40°	1563.5	19.2
40°-50°	1426.4	17.5
50°-60°	1117.5	13.7
60°-70°	728.3	8.9
70°-80°	322.7	4.0
80°-90°	69.3	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°	2911.4	35.8
0°-40°	4474.9	55.0
0°-60°	7018.8	86.2
0°-90°	8139.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8139.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4146	4146	4146	4146	4146	
5°	4074	4069	4069	4064	4064	387
15°	3810	3810	3772	3734	3719	1071
25°	3302	3283	3230	3115	3029	1516
35°	2679	2660	2531	2339	2281	1675
45°	2056	2013	1840	1687	1620	1584
55°	1428	1385	1256	1107	1050	1281
65°	848	800	724	738	614	836
75°	340	316	297	283	312	365
85°	48	53	58	62	67	66
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4145.9	4145.9	4145.9	4145.9	4145.9
2.5°	4117.1	4117.1	4117.1	4112.3	4112.3
5°	4074.0	4069.2	4069.2	4064.4	4064.4
7.5°	4040.5	4035.7	4030.9	4026.1	4016.5
10°	3992.5	3992.5	3987.7	3963.8	3959.0
12.5°	3915.8	3911.0	3891.9	3858.3	3848.7
15°	3810.4	3810.4	3772.0	3733.7	3719.3
17.5°	3695.4	3690.6	3642.6	3604.3	3585.1
20°	3570.7	3561.2	3513.2	3450.9	3417.4
22.5°	3431.7	3431.7	3374.2	3292.8	3259.2
25°	3302.3	3283.2	3230.4	3115.4	3029.1
27.5°	3153.8	3125.0	3067.5	2904.5	2803.9
30°	2990.8	2976.4	2894.9	2684.0	2607.4
32.5°	2837.4	2813.5	2727.2	2506.7	2444.4
35°	2679.3	2660.1	2530.7	2339.0	2281.4
37.5°	2521.1	2497.1	2334.2	2180.8	2108.9
40°	2362.9	2334.2	2156.8	2017.8	1941.1
42.5°	2214.3	2176.0	2003.5	1854.9	1768.6
45°	2056.2	2013.0	1840.5	1687.1	1620.0
47.5°	1898.0	1859.7	1701.5	1543.3	1466.6
50°	1730.3	1696.7	1552.9	1394.7	1313.3
52.5°	1591.3	1538.5	1399.5	1241.4	1174.3
55°	1428.3	1385.2	1255.8	1107.2	1049.7
57.5°	1279.7	1236.6	1116.8	977.8	929.8
60°	1140.7	1078.4	977.8	857.9	819.6
62.5°	987.3	939.4	853.1	752.5	800.4
65°	848.4	800.4	723.7	738.1	613.5
67.5°	695.0	671.0	603.9	536.8	517.6
70°	565.6	536.8	512.8	441.0	421.8
72.5°	450.5	421.8	388.2	349.9	335.5
75°	340.3	316.3	297.2	282.8	311.5
77.5°	234.9	225.3	210.9	196.5	191.7
80°	153.4	148.6	143.8	139.0	134.2
82.5°	91.1	91.1	91.1	91.1	91.1
85°	47.9	52.7	57.5	62.3	67.1
87.5°	28.8	28.8	33.6	38.3	43.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)