

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: P562573

Luminaire Tested: FSR-24-4-LD4-2HI-40-UNV-81-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562573
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-LD4-2HI-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9105.0 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

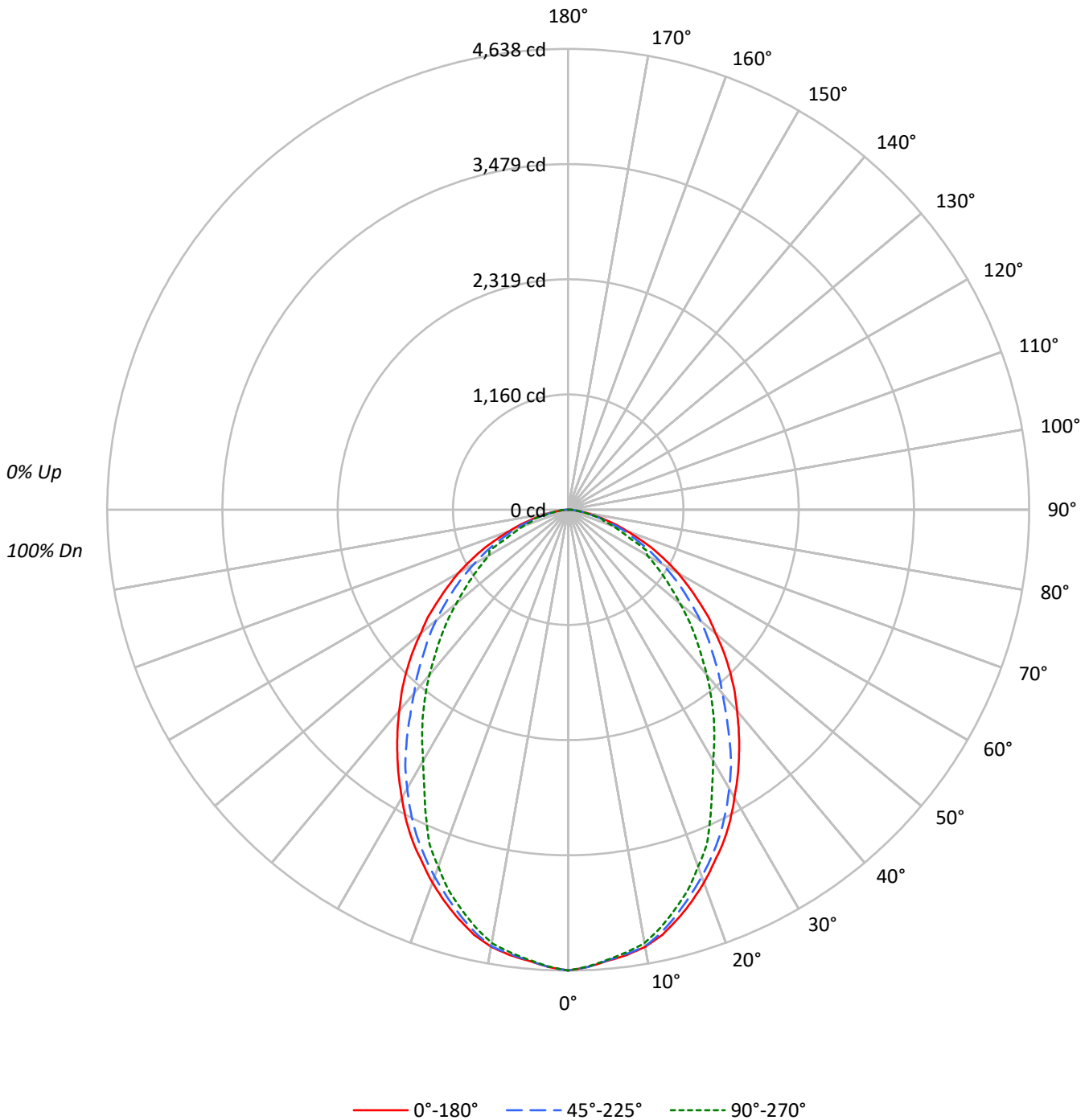
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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°	6240	6240	6240
5°	6155	6148	6141
10°	6102	6095	6051
15°	5938	5878	5796
20°	5719	5627	5474
25°	5484	5365	5031
30°	5198	5031	4532
35°	4923	4650	4192
40°	4643	4238	3814
45°	4377	3918	3448
50°	4052	3636	3075
55°	3748	3295	2754
60°	3434	2943	2467
65°	3021	2578	2185
70°	2489	2257	1856
75°	1979	1728	1812
80°	1330	1247	1163
85°	827	993	1159

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4377 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	431.7	4.7
10°-20°	1184.9	13.0
20°-30°	1640.4	18.0
30°-40°	1749.1	19.2
40°-50°	1595.7	17.5
50°-60°	1250.1	13.7
60°-70°	814.7	8.9
70°-80°	361.0	4.0
80°-90°	77.5	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°	3256.9	35.8
0°-40°	5006.0	55.0
0°-60°	7851.8	86.2
0°-90°	9105.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9105.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4638	4638	4638	4638	4638	
5°	4558	4552	4552	4547	4547	433
15°	4263	4263	4220	4177	4161	1198
25°	3694	3673	3614	3485	3389	1696
35°	2997	2976	2831	2617	2552	1874
45°	2300	2252	2059	1887	1812	1772
55°	1598	1550	1405	1239	1174	1433
65°	949	895	810	826	686	935
75°	381	354	332	316	348	408
85°	54	59	64	70	75	74
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4638.0	4638.0	4638.0	4638.0	4638.0
2.5°	4605.8	4605.8	4605.8	4600.4	4600.4
5°	4557.5	4552.2	4552.2	4546.8	4546.8
7.5°	4520.0	4514.6	4509.3	4503.9	4493.2
10°	4466.4	4466.4	4461.0	4434.2	4428.9
12.5°	4380.6	4375.2	4353.8	4316.3	4305.5
15°	4262.6	4262.6	4219.7	4176.8	4160.8
17.5°	4134.0	4128.6	4075.0	4032.1	4010.6
20°	3994.5	3983.8	3930.2	3860.5	3823.0
22.5°	3839.1	3839.1	3774.7	3683.6	3646.0
25°	3694.3	3672.8	3613.9	3485.2	3388.7
27.5°	3528.1	3495.9	3431.6	3249.3	3136.7
30°	3345.8	3329.7	3238.5	3002.6	2916.8
32.5°	3174.2	3147.4	3050.9	2804.2	2734.5
35°	2997.3	2975.8	2831.0	2616.6	2552.2
37.5°	2820.3	2793.5	2611.2	2439.6	2359.2
40°	2643.4	2611.2	2412.8	2257.3	2171.5
42.5°	2477.2	2434.3	2241.2	2075.0	1978.5
45°	2300.2	2252.0	2058.9	1887.4	1812.3
47.5°	2123.3	2080.4	1903.4	1726.5	1640.7
50°	1935.6	1898.1	1737.2	1560.3	1469.1
52.5°	1780.1	1721.1	1565.6	1388.7	1313.6
55°	1597.8	1549.6	1404.8	1238.6	1174.2
57.5°	1431.6	1383.3	1249.3	1093.8	1040.2
60°	1276.1	1206.4	1093.8	959.8	916.9
62.5°	1104.5	1050.9	954.4	841.8	895.4
65°	949.0	895.4	809.6	825.7	686.3
67.5°	777.5	750.7	675.6	600.5	579.1
70°	632.7	600.5	573.7	493.3	471.8
72.5°	504.0	471.8	434.3	391.4	375.3
75°	380.7	353.9	332.4	316.3	348.5
77.5°	262.7	252.0	235.9	219.8	214.5
80°	171.6	166.2	160.9	155.5	150.1
82.5°	101.9	101.9	101.9	101.9	101.9
85°	53.6	59.0	64.3	69.7	75.1
87.5°	32.2	32.2	37.5	42.9	48.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)