

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: P563082

Luminaire Tested: FSR-24-4-LD4-3HI-35-UNV-81-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563082
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-LD4-3HI-35-UNV-81-94-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11441.0 lumens
Efficiency: N/A
Efficacy: 88.3 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

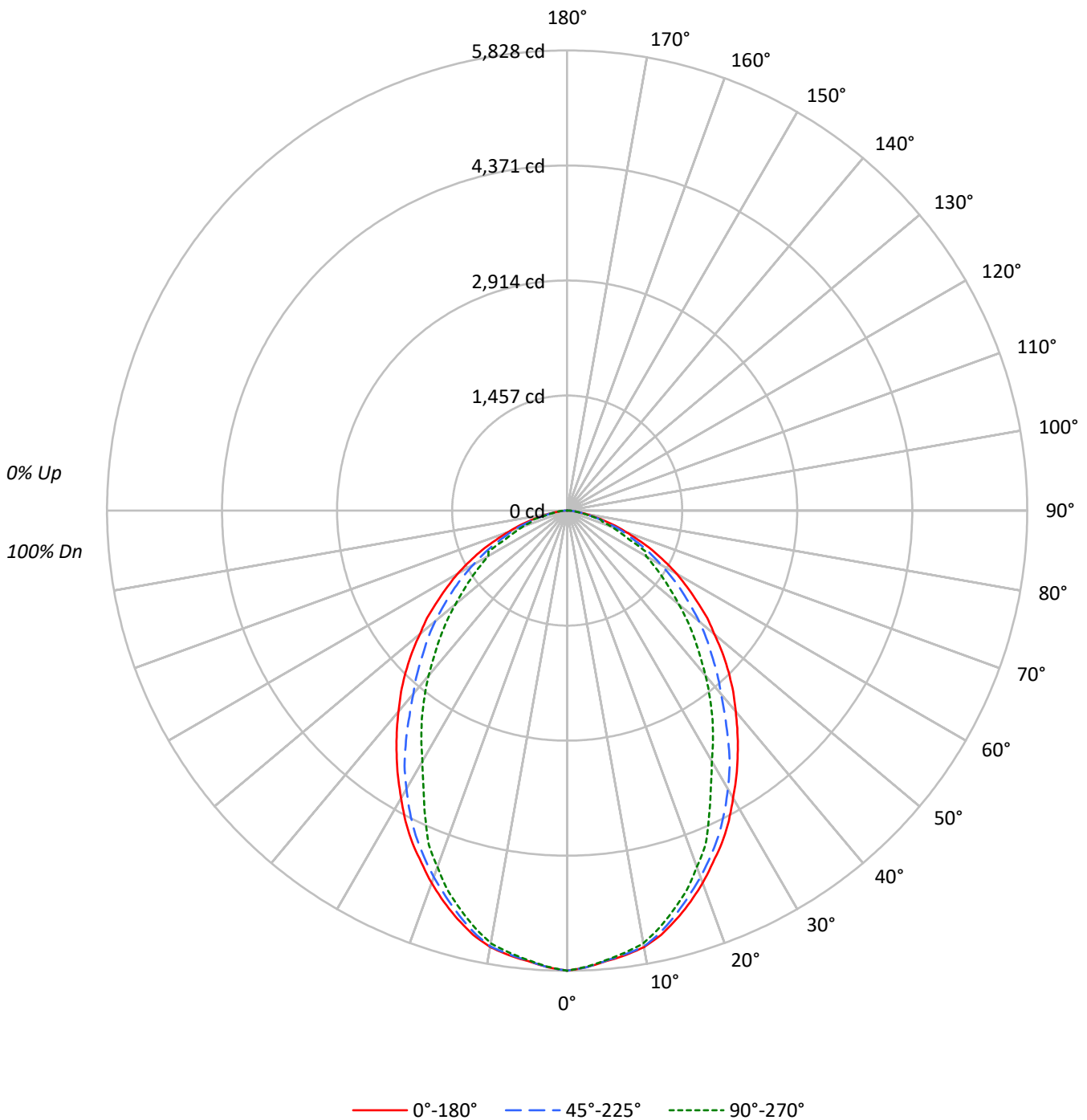
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	7841	7841	7841
5°	7735	7726	7717
10°	7668	7659	7603
15°	7461	7386	7283
20°	7187	7071	6878
25°	6892	6741	6322
30°	6532	6322	5694
35°	6186	5843	5268
40°	5834	5325	4793
45°	5500	4923	4333
50°	5091	4569	3864
55°	4710	4141	3461
60°	4315	3698	3100
65°	3797	3239	2746
70°	3127	2836	2332
75°	2487	2171	2276
80°	1671	1566	1461
85°	1041	1247	1456

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5500 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	542.5	4.7
10°-20°	1488.8	13.0
20°-30°	2061.2	18.0
30°-40°	2197.8	19.2
40°-50°	2005.1	17.5
50°-60°	1570.8	13.7
60°-70°	1023.8	8.9
70°-80°	453.6	4.0
80°-90°	97.4	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
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0°-30°	4092.5	35.8
0°-40°	6290.4	55.0
0°-60°	9866.3	86.2
0°-90°	11441.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11441.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5828	5828	5828	5828	5828	
5°	5727	5720	5720	5713	5713	544
15°	5356	5356	5302	5248	5228	1506
25°	4642	4615	4541	4379	4258	2131
35°	3766	3739	3557	3288	3207	2355
45°	2890	2830	2587	2372	2277	2226
55°	2008	1947	1765	1556	1476	1801
65°	1192	1125	1017	1038	862	1175
75°	478	445	418	398	438	513
85°	67	74	81	88	94	93
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5827.9	5827.9	5827.9	5827.9	5827.9
2.5°	5787.5	5787.5	5787.5	5780.7	5780.7
5°	5726.8	5720.1	5720.1	5713.4	5713.4
7.5°	5679.7	5672.9	5666.2	5659.5	5646.0
10°	5612.3	5612.3	5605.6	5571.9	5565.1
12.5°	5504.5	5497.8	5470.8	5423.6	5410.2
15°	5356.3	5356.3	5302.4	5248.5	5228.3
17.5°	5194.6	5187.8	5120.5	5066.6	5039.6
20°	5019.4	5005.9	4938.5	4851.0	4803.8
22.5°	4824.0	4824.0	4743.2	4628.6	4581.5
25°	4642.1	4615.2	4541.0	4379.3	4258.1
27.5°	4433.2	4392.8	4312.0	4082.9	3941.4
30°	4204.2	4184.0	4069.4	3773.0	3665.2
32.5°	3988.6	3954.9	3833.6	3523.7	3436.1
35°	3766.2	3739.3	3557.4	3287.9	3207.0
37.5°	3543.9	3510.2	3281.1	3065.5	2964.5
40°	3321.6	3281.1	3031.9	2836.5	2728.7
42.5°	3112.7	3058.8	2816.3	2607.4	2486.1
45°	2890.4	2829.7	2587.2	2371.6	2277.3
47.5°	2668.0	2614.1	2391.8	2169.5	2061.7
50°	2432.2	2385.1	2182.9	1960.6	1846.1
52.5°	2236.8	2162.7	1967.3	1745.0	1650.7
55°	2007.8	1947.1	1765.2	1556.4	1475.5
57.5°	1798.9	1738.3	1569.8	1374.4	1307.1
60°	1603.5	1515.9	1374.4	1206.0	1152.1
62.5°	1387.9	1320.5	1199.3	1057.8	1125.2
65°	1192.5	1125.2	1017.4	1037.6	862.4
67.5°	976.9	943.2	848.9	754.6	727.6
70°	795.0	754.6	720.9	619.8	592.9
72.5°	633.3	592.9	545.7	491.8	471.6
75°	478.4	444.7	417.7	397.5	437.9
77.5°	330.1	316.7	296.4	276.2	269.5
80°	215.6	208.9	202.1	195.4	188.6
82.5°	128.0	128.0	128.0	128.0	128.0
85°	67.4	74.1	80.8	87.6	94.3
87.5°	40.4	40.4	47.2	53.9	60.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)