

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: P562204

Luminaire Tested: FSR-24-4-LD4-1LO-40-UNV-82-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562204
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-LD4-1LO-40-UNV-82-96-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2280.0 lumens
Efficiency: N/A
Efficacy: 97.4 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

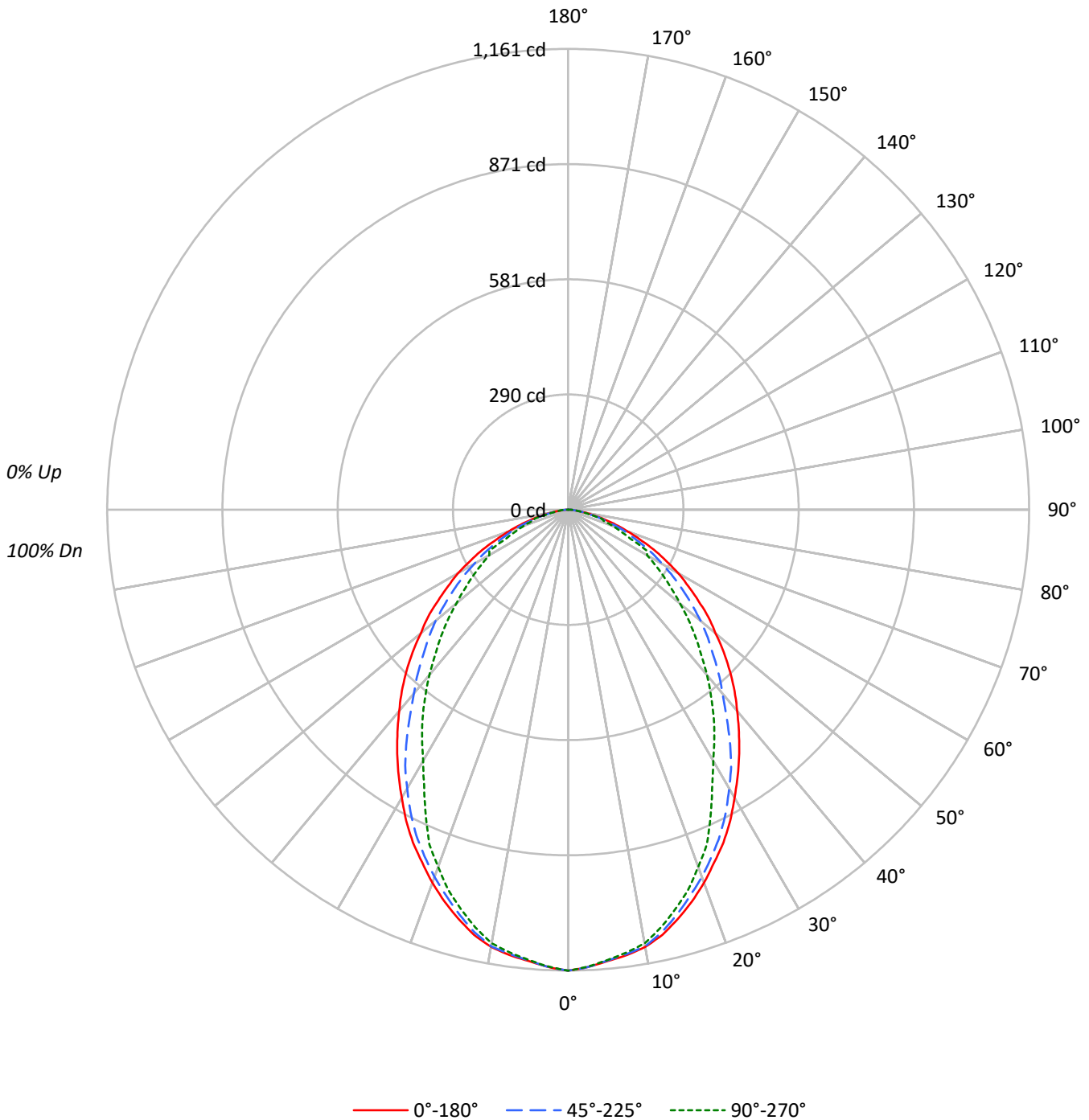
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					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	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°	1563	1563	1563
5°	1541	1540	1538
10°	1528	1526	1515
15°	1487	1472	1451
20°	1432	1409	1371
25°	1373	1344	1260
30°	1302	1260	1135
35°	1233	1164	1050
40°	1163	1061	955
45°	1096	981	863
50°	1015	911	770
55°	939	825	690
60°	860	737	618
65°	757	645	547
70°	623	565	465
75°	495	433	454
80°	333	312	291
85°	207	249	290

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1096 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.1	4.7
10°-20°	296.7	13.0
20°-30°	410.8	18.0
30°-40°	438.0	19.2
40°-50°	399.6	17.5
50°-60°	313.0	13.7
60°-70°	204.0	8.9
70°-80°	90.4	4.0
80°-90°	19.4	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
0°-30°	815.6	35.8
0°-40°	1253.6	55.0
0°-60°	1966.2	86.2
0°-90°	2280.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2280.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1161	1161	1161	1161	1161	
5°	1141	1140	1140	1139	1139	108
15°	1067	1067	1057	1046	1042	300
25°	925	920	905	873	849	425
35°	750	745	709	655	639	469
45°	576	564	516	473	454	444
55°	400	388	352	310	294	359
65°	238	224	203	207	172	234
75°	95	89	83	79	87	102
85°	13	15	16	18	19	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1161.4	1161.4	1161.4	1161.4	1161.4
2.5°	1153.3	1153.3	1153.3	1152.0	1152.0
5°	1141.3	1139.9	1139.9	1138.6	1138.6
7.5°	1131.9	1130.5	1129.2	1127.8	1125.1
10°	1118.4	1118.4	1117.1	1110.4	1109.0
12.5°	1097.0	1095.6	1090.2	1080.8	1078.2
15°	1067.4	1067.4	1056.7	1045.9	1041.9
17.5°	1035.2	1033.8	1020.4	1009.7	1004.3
20°	1000.3	997.6	984.2	966.7	957.3
22.5°	961.3	961.3	945.2	922.4	913.0
25°	925.1	919.7	905.0	872.7	848.6
27.5°	883.5	875.4	859.3	813.7	785.5
30°	837.8	833.8	811.0	751.9	730.4
32.5°	794.9	788.1	764.0	702.2	684.8
35°	750.5	745.2	708.9	655.2	639.1
37.5°	706.2	699.5	653.9	610.9	590.8
40°	661.9	653.9	604.2	565.3	543.8
42.5°	620.3	609.6	561.2	519.6	495.4
45°	576.0	563.9	515.6	472.6	453.8
47.5°	531.7	521.0	476.6	432.3	410.9
50°	484.7	475.3	435.0	390.7	367.9
52.5°	445.8	431.0	392.1	347.7	329.0
55°	400.1	388.0	351.8	310.2	294.0
57.5°	358.5	346.4	312.8	273.9	260.5
60°	319.6	302.1	273.9	240.3	229.6
62.5°	276.6	263.2	239.0	210.8	224.2
65°	237.7	224.2	202.7	206.8	171.9
67.5°	194.7	188.0	169.2	150.4	145.0
70°	158.4	150.4	143.7	123.5	118.2
72.5°	126.2	118.2	108.8	98.0	94.0
75°	95.3	88.6	83.2	79.2	87.3
77.5°	65.8	63.1	59.1	55.0	53.7
80°	43.0	41.6	40.3	38.9	37.6
82.5°	25.5	25.5	25.5	25.5	25.5
85°	13.4	14.8	16.1	17.5	18.8
87.5°	8.1	8.1	9.4	10.7	12.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)