

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: P562194

Luminaire Tested: FSR-24-4-LD4-1LO-40-UNV-82-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562194
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-82-85-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2254.0 lumens
Efficiency: N/A
Efficacy: 96.3 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

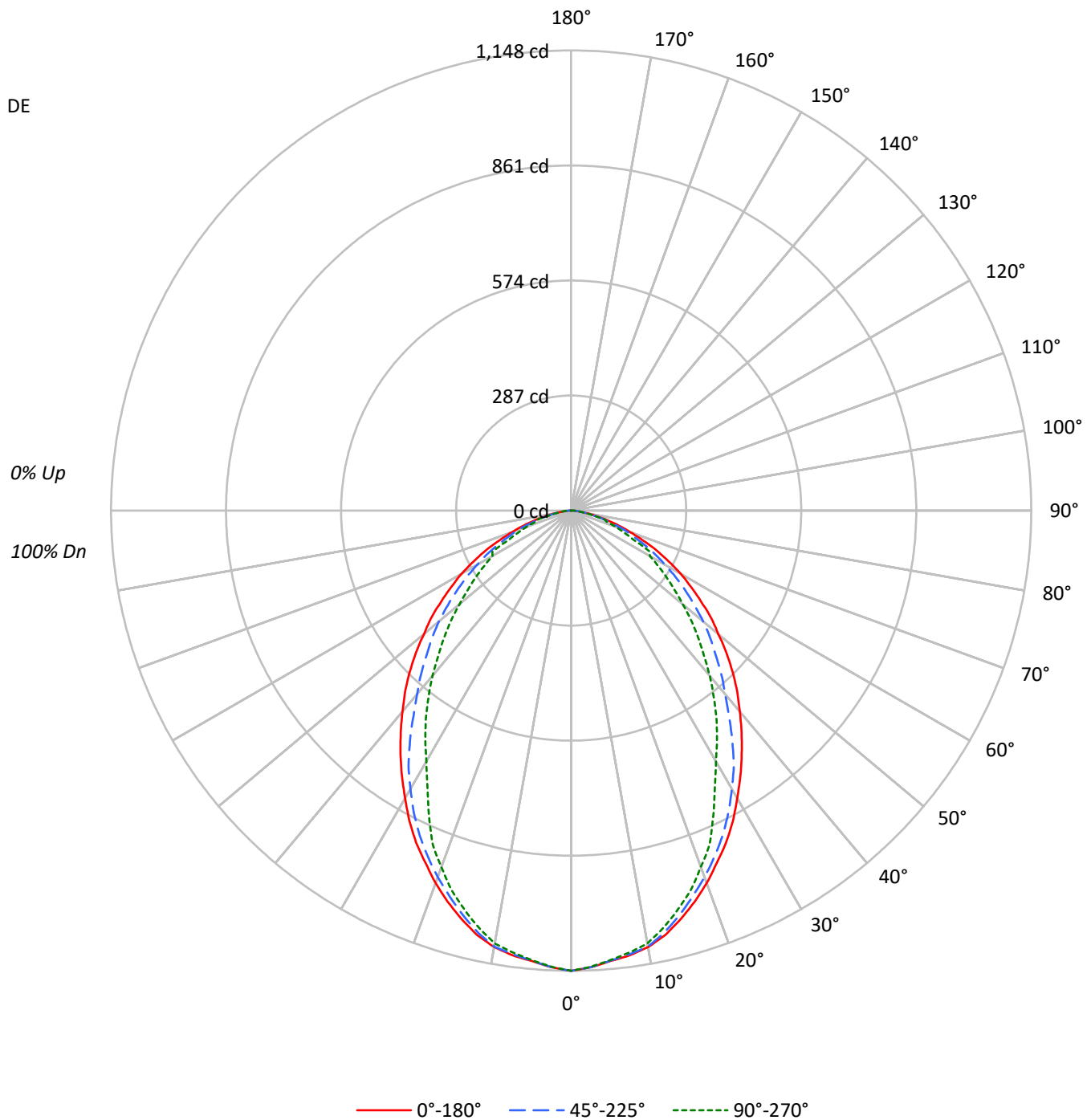
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	1545	1545	1545
5°	1524	1522	1520
10°	1511	1509	1498
15°	1470	1455	1435
20°	1416	1393	1355
25°	1358	1328	1245
30°	1287	1246	1122
35°	1219	1151	1038
40°	1149	1049	944
45°	1083	970	854
50°	1003	900	761
55°	928	816	682
60°	850	729	611
65°	748	638	541
70°	616	559	459
75°	490	428	449
80°	329	308	288
85°	205	245	287

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1083 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.9	4.7
10°-20°	293.3	13.0
20°-30°	406.1	18.0
30°-40°	433.0	19.2
40°-50°	395.0	17.5
50°-60°	309.5	13.7
60°-70°	201.7	8.9
70°-80°	89.4	4.0
80°-90°	19.2	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°	806.3	35.8
0°-40°	1239.3	55.0
0°-60°	1943.8	86.2
0°-90°	2254.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2254.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1148	1148	1148	1148	1148	
5°	1128	1127	1127	1126	1126	107
15°	1055	1055	1045	1034	1030	297
25°	914	909	895	863	839	420
35°	742	737	701	648	632	464
45°	569	558	510	467	449	439
55°	396	384	348	307	291	355
65°	235	222	200	204	170	232
75°	94	88	82	78	86	101
85°	13	15	16	17	19	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1148.2	1148.2	1148.2	1148.2	1148.2
2.5°	1140.2	1140.2	1140.2	1138.9	1138.9
5°	1128.2	1126.9	1126.9	1125.6	1125.6
7.5°	1119.0	1117.6	1116.3	1115.0	1112.3
10°	1105.7	1105.7	1104.4	1097.7	1096.4
12.5°	1084.4	1083.1	1077.8	1068.5	1065.9
15°	1055.2	1055.2	1044.6	1034.0	1030.0
17.5°	1023.4	1022.1	1008.8	998.2	992.9
20°	988.9	986.2	972.9	955.7	946.4
22.5°	950.4	950.4	934.5	911.9	902.6
25°	914.5	909.2	894.6	862.8	838.9
27.5°	873.4	865.4	849.5	804.4	776.5
30°	828.3	824.3	801.7	743.3	722.1
32.5°	785.8	779.2	755.3	694.2	676.9
35°	742.0	736.7	700.8	647.7	631.8
37.5°	698.2	691.5	646.4	603.9	584.0
40°	654.4	646.4	597.3	558.8	537.6
42.5°	613.2	602.6	554.8	513.7	489.8
45°	569.4	557.5	509.7	467.2	448.6
47.5°	525.6	515.0	471.2	427.4	406.2
50°	479.2	469.9	430.1	386.3	363.7
52.5°	440.7	426.1	387.6	343.8	325.2
55°	395.6	383.6	347.8	306.6	290.7
57.5°	354.4	342.5	309.3	270.8	257.5
60°	315.9	298.7	270.8	237.6	227.0
62.5°	273.4	260.2	236.3	208.4	221.7
65°	234.9	221.7	200.4	204.4	169.9
67.5°	192.5	185.8	167.2	148.7	143.4
70°	156.6	148.7	142.0	122.1	116.8
72.5°	124.8	116.8	107.5	96.9	92.9
75°	94.2	87.6	82.3	78.3	86.3
77.5°	65.0	62.4	58.4	54.4	53.1
80°	42.5	41.1	39.8	38.5	37.2
82.5°	25.2	25.2	25.2	25.2	25.2
85°	13.3	14.6	15.9	17.3	18.6
87.5°	8.0	8.0	9.3	10.6	11.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)