

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: P562203

Luminaire Tested: FSR-24-4-LD4-1LO-40-UNV-82-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562203
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-82-94-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 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: 2743.0 lumens
Efficiency: N/A
Efficacy: 117.2 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

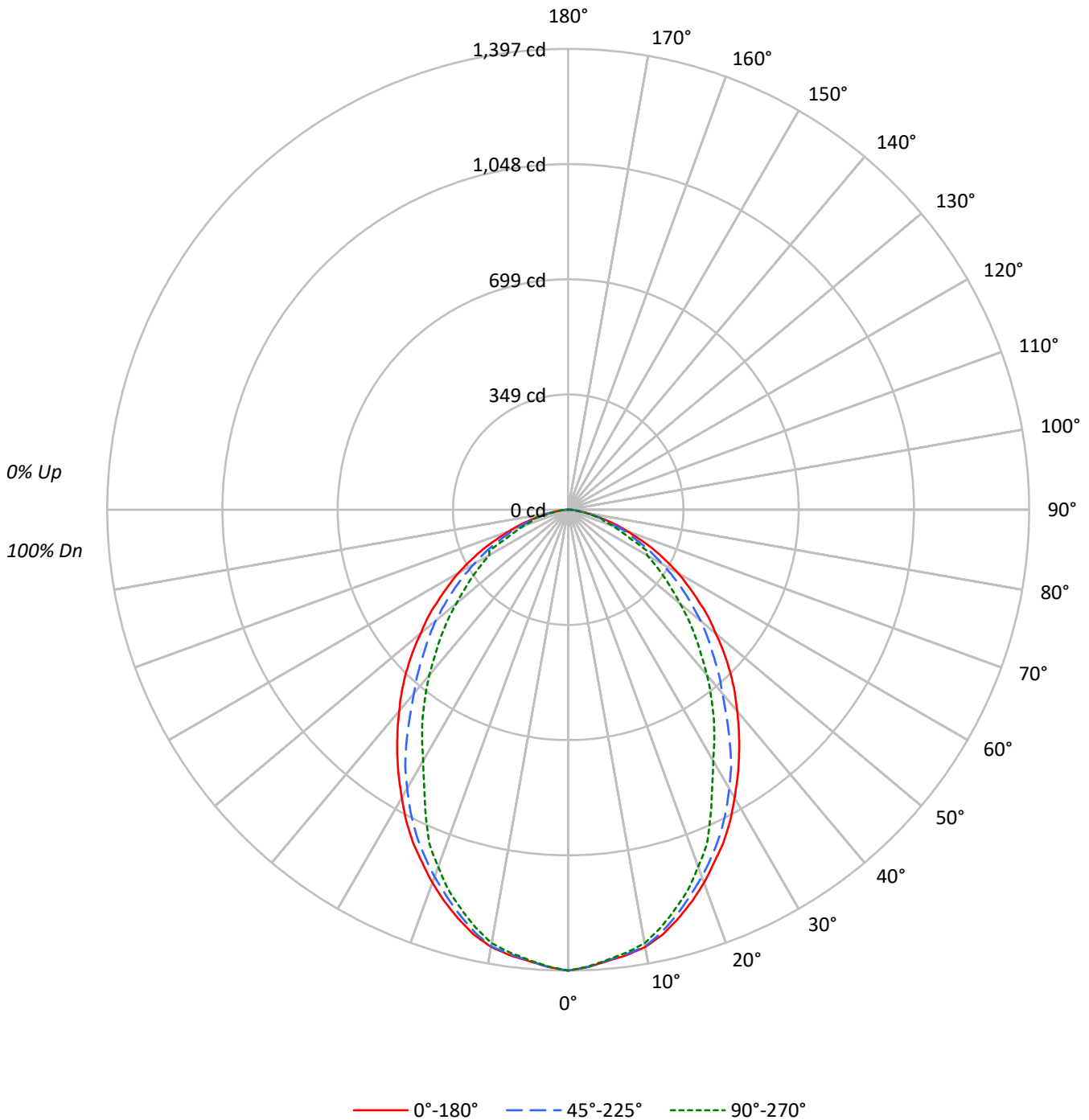
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	1880	1880	1880
5°	1854	1852	1850
10°	1838	1836	1823
15°	1789	1771	1746
20°	1723	1695	1649
25°	1652	1616	1516
30°	1566	1516	1365
35°	1483	1401	1263
40°	1399	1277	1149
45°	1319	1180	1039
50°	1221	1096	926
55°	1129	993	830
60°	1034	887	743
65°	910	777	658
70°	750	680	559
75°	596	520	546
80°	401	376	350
85°	250	299	349

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1319 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.1	4.7
10°-20°	357.0	13.0
20°-30°	494.2	18.0
30°-40°	526.9	19.2
40°-50°	480.7	17.5
50°-60°	376.6	13.7
60°-70°	245.4	8.9
70°-80°	108.7	4.0
80°-90°	23.4	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°	981.2	35.8
0°-40°	1508.1	55.0
0°-60°	2365.5	86.2
0°-90°	2743.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2743.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1397	1397	1397	1397	1397	
5°	1373	1371	1371	1370	1370	130
15°	1284	1284	1271	1258	1254	361
25°	1113	1106	1089	1050	1021	511
35°	903	896	853	788	769	565
45°	693	678	620	569	546	534
55°	481	467	423	373	354	432
65°	286	270	244	249	207	282
75°	115	107	100	95	105	123
85°	16	18	19	21	23	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1397.2	1397.2	1397.2	1397.2	1397.2
2.5°	1387.6	1387.6	1387.6	1385.9	1385.9
5°	1373.0	1371.4	1371.4	1369.8	1369.8
7.5°	1361.7	1360.1	1358.5	1356.9	1353.6
10°	1345.6	1345.6	1343.9	1335.9	1334.3
12.5°	1319.7	1318.1	1311.6	1300.3	1297.1
15°	1284.2	1284.2	1271.3	1258.3	1253.5
17.5°	1245.4	1243.8	1227.6	1214.7	1208.3
20°	1203.4	1200.2	1184.0	1163.0	1151.7
22.5°	1156.6	1156.6	1137.2	1109.7	1098.4
25°	1113.0	1106.5	1088.7	1050.0	1020.9
27.5°	1062.9	1053.2	1033.8	978.9	945.0
30°	1008.0	1003.1	975.7	904.6	878.7
32.5°	956.3	948.2	919.1	844.8	823.8
35°	903.0	896.5	852.9	788.3	768.9
37.5°	849.7	841.6	786.7	735.0	710.7
40°	796.4	786.7	726.9	680.0	654.2
42.5°	746.3	733.4	675.2	625.1	596.1
45°	693.0	678.4	620.3	568.6	546.0
47.5°	639.7	626.7	573.4	520.1	494.3
50°	583.1	571.8	523.4	470.1	442.6
52.5°	536.3	518.5	471.7	418.4	395.8
55°	481.4	466.8	423.2	373.1	353.8
57.5°	431.3	416.8	376.4	329.5	313.4
60°	384.4	363.4	329.5	289.1	276.2
62.5°	332.8	316.6	287.5	253.6	269.8
65°	285.9	269.8	243.9	248.8	206.8
67.5°	234.2	226.1	203.5	180.9	174.5
70°	190.6	180.9	172.8	148.6	142.1
72.5°	151.8	142.1	130.8	117.9	113.1
75°	114.7	106.6	100.1	95.3	105.0
77.5°	79.2	75.9	71.1	66.2	64.6
80°	51.7	50.1	48.5	46.8	45.2
82.5°	30.7	30.7	30.7	30.7	30.7
85°	16.2	17.8	19.4	21.0	22.6
87.5°	9.7	9.7	11.3	12.9	14.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)