

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: P562330

Luminaire Tested: FSR-24-4-LD4-1STD-35-UNV-82-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562330
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-LD4-1STD-35-UNV-82-94-EDD-90
Description: 2X4 FSR TROFFER WITH .187 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: 3044.0 lumens
Efficiency: N/A
Efficacy: 91.4 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

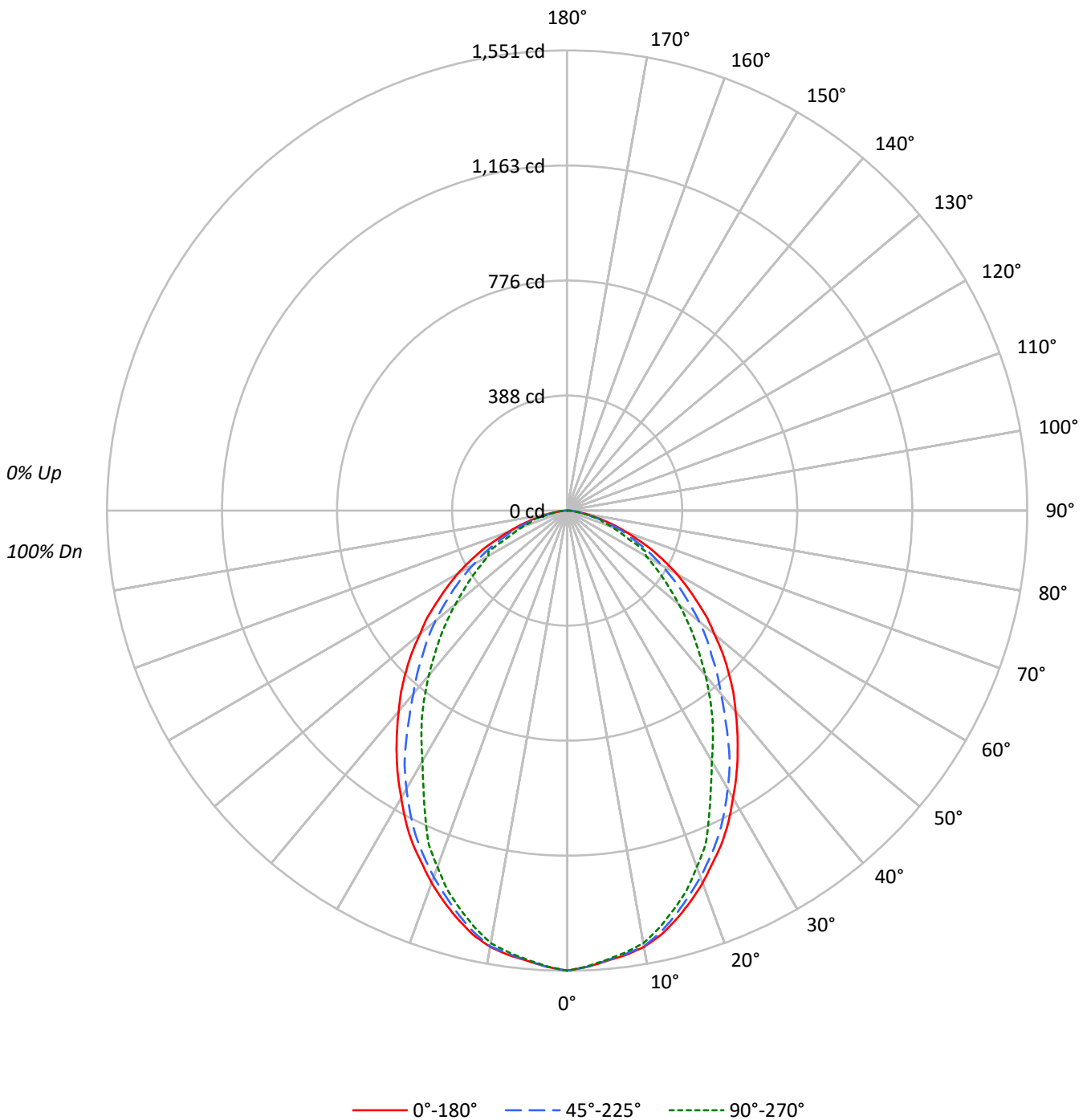
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2086	2086	2086
5°	2058	2056	2053
10°	2040	2038	2023
15°	1985	1965	1938
20°	1912	1881	1830
25°	1834	1794	1682
30°	1738	1682	1515
35°	1646	1555	1402
40°	1552	1417	1275
45°	1463	1310	1153
50°	1355	1216	1028
55°	1253	1102	921
60°	1148	984	825
65°	1010	862	730
70°	832	755	620
75°	662	578	606
80°	445	417	389
85°	276	332	387

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1463 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.3	4.7
10°-20°	396.1	13.0
20°-30°	548.4	18.0
30°-40°	584.8	19.2
40°-50°	533.5	17.5
50°-60°	417.9	13.7
60°-70°	272.4	8.9
70°-80°	120.7	4.0
80°-90°	25.9	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°	1088.9	35.8
0°-40°	1673.6	55.0
0°-60°	2625.0	86.2
0°-90°	3044.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3044.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1551	1551	1551	1551	1551	
5°	1524	1522	1522	1520	1520	145
15°	1425	1425	1411	1396	1391	401
25°	1235	1228	1208	1165	1133	567
35°	1002	995	946	875	853	626
45°	769	753	688	631	606	592
55°	534	518	470	414	393	479
65°	317	299	271	276	229	313
75°	127	118	111	106	116	136
85°	18	20	22	23	25	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1550.6	1550.6	1550.6	1550.6	1550.6
2.5°	1539.8	1539.8	1539.8	1538.0	1538.0
5°	1523.7	1521.9	1521.9	1520.1	1520.1
7.5°	1511.1	1509.3	1507.6	1505.8	1502.2
10°	1493.2	1493.2	1491.4	1482.5	1480.7
12.5°	1464.5	1462.7	1455.6	1443.0	1439.4
15°	1425.1	1425.1	1410.8	1396.4	1391.0
17.5°	1382.1	1380.3	1362.4	1348.0	1340.8
20°	1335.5	1331.9	1314.0	1290.7	1278.1
22.5°	1283.5	1283.5	1262.0	1231.5	1218.9
25°	1235.1	1227.9	1208.2	1165.2	1132.9
27.5°	1179.5	1168.8	1147.2	1086.3	1048.7
30°	1118.6	1113.2	1082.7	1003.8	975.2
32.5°	1061.2	1052.2	1020.0	937.5	914.2
35°	1002.0	994.9	946.5	874.8	853.3
37.5°	942.9	933.9	873.0	815.6	788.7
40°	883.7	873.0	806.7	754.7	726.0
42.5°	828.2	813.8	749.3	693.7	661.5
45°	769.0	752.9	688.3	631.0	605.9
47.5°	709.9	695.5	636.4	577.2	548.5
50°	647.1	634.6	580.8	521.6	491.2
52.5°	595.1	575.4	523.4	464.3	439.2
55°	534.2	518.1	469.7	414.1	392.6
57.5°	478.6	462.5	417.7	365.7	347.8
60°	426.6	403.3	365.7	320.9	306.5
62.5°	369.3	351.3	319.1	281.4	299.4
65°	317.3	299.4	270.7	276.1	229.4
67.5°	259.9	251.0	225.9	200.8	193.6
70°	211.5	200.8	191.8	164.9	157.7
72.5°	168.5	157.7	145.2	130.9	125.5
75°	127.3	118.3	111.1	105.8	116.5
77.5°	87.8	84.3	78.9	73.5	71.7
80°	57.4	55.6	53.8	52.0	50.2
82.5°	34.1	34.1	34.1	34.1	34.1
85°	17.9	19.7	21.5	23.3	25.1
87.5°	10.8	10.8	12.5	14.3	16.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)