

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: P562388

Luminaire Tested: FSR-24-4-LD4-1STD-40-UNV-82-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562388
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-40-UNV-82-86-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2985.0 lumens
Efficiency: N/A
Efficacy: 89.6 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

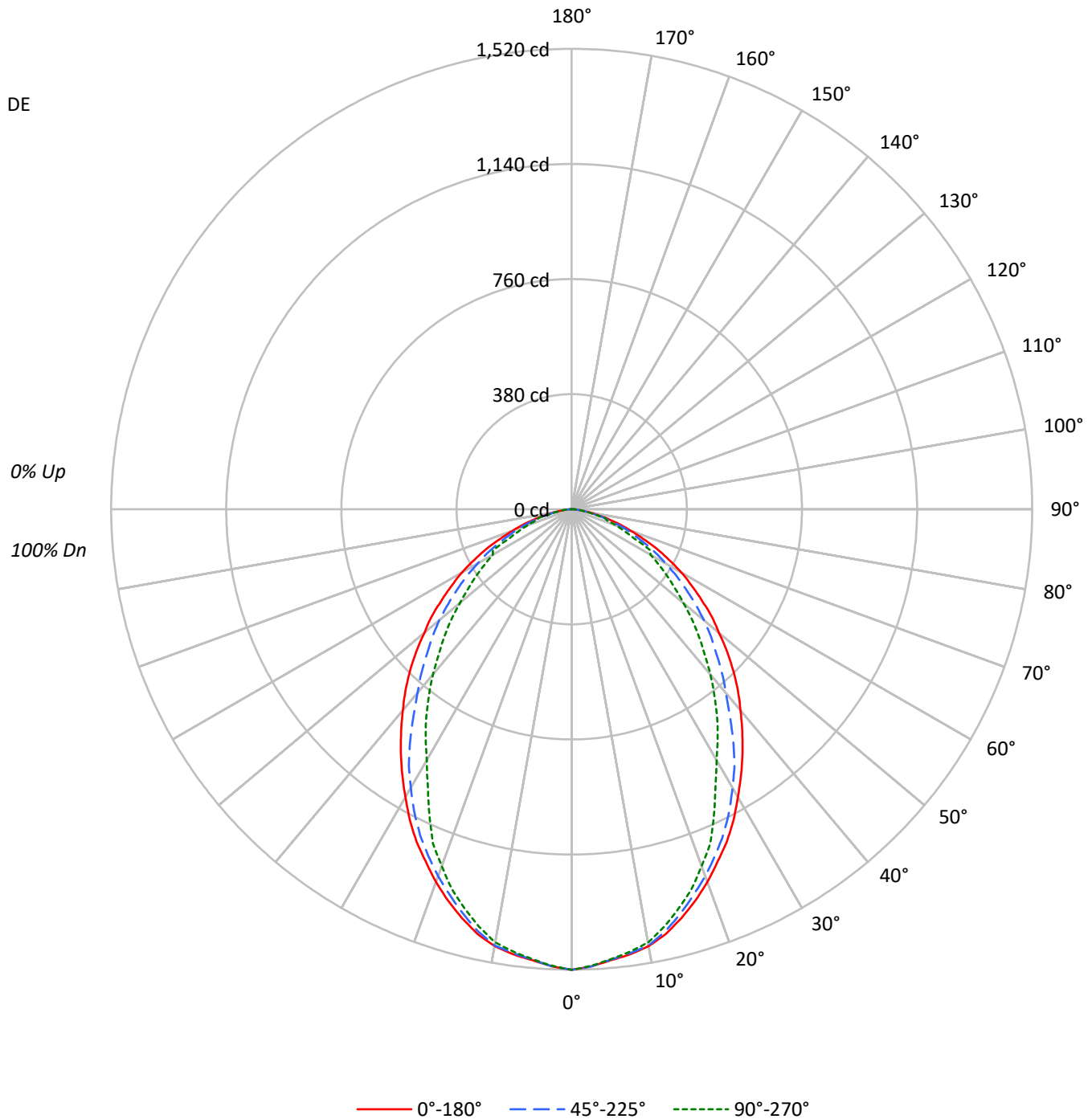
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2046	2046	2046
5°	2018	2016	2013
10°	2001	1998	1984
15°	1947	1927	1900
20°	1875	1845	1795
25°	1798	1759	1649
30°	1704	1649	1486
35°	1614	1524	1374
40°	1522	1389	1250
45°	1435	1284	1130
50°	1328	1192	1008
55°	1229	1080	903
60°	1126	965	809
65°	990	845	716
70°	816	740	609
75°	649	567	594
80°	436	408	381
85°	272	326	380

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1435 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.5	4.7
10°-20°	388.4	13.0
20°-30°	537.8	18.0
30°-40°	573.4	19.2
40°-50°	523.1	17.5
50°-60°	409.8	13.7
60°-70°	267.1	8.9
70°-80°	118.3	4.0
80°-90°	25.4	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°	1067.8	35.8
0°-40°	1641.2	55.0
0°-60°	2574.1	86.2
0°-90°	2985.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2985.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1520	1520	1520	1520	1520	
5°	1494	1492	1492	1491	1491	142
15°	1398	1398	1383	1369	1364	393
25°	1211	1204	1185	1143	1111	556
35°	983	976	928	858	837	614
45°	754	738	675	619	594	581
55°	524	508	461	406	385	470
65°	311	294	265	271	225	307
75°	125	116	109	104	114	134
85°	18	19	21	23	25	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1520.5	1520.5	1520.5	1520.5	1520.5
2.5°	1510.0	1510.0	1510.0	1508.2	1508.2
5°	1494.2	1492.4	1492.4	1490.6	1490.6
7.5°	1481.8	1480.1	1478.3	1476.6	1473.1
10°	1464.3	1464.3	1462.5	1453.7	1452.0
12.5°	1436.1	1434.4	1427.4	1415.0	1411.5
15°	1397.5	1397.5	1383.4	1369.3	1364.1
17.5°	1355.3	1353.5	1335.9	1321.9	1314.9
20°	1309.6	1306.1	1288.5	1265.6	1253.3
22.5°	1258.6	1258.6	1237.5	1207.6	1195.3
25°	1211.1	1204.1	1184.8	1142.6	1110.9
27.5°	1156.6	1146.1	1125.0	1065.2	1028.3
30°	1096.9	1091.6	1061.7	984.4	956.3
32.5°	1040.6	1031.8	1000.2	919.3	896.5
35°	982.6	975.6	928.1	857.8	836.7
37.5°	924.6	915.8	856.1	799.8	773.4
40°	866.6	856.1	791.0	740.0	711.9
42.5°	812.1	798.1	734.8	680.3	648.6
45°	754.1	738.3	675.0	618.8	594.1
47.5°	696.1	682.0	624.0	566.0	537.9
50°	634.6	622.3	569.5	511.5	481.6
52.5°	583.6	564.3	513.3	455.3	430.7
55°	523.8	508.0	460.6	406.1	385.0
57.5°	469.3	453.5	409.6	358.6	341.0
60°	418.4	395.5	358.6	314.7	300.6
62.5°	362.1	344.5	312.9	276.0	293.6
65°	311.1	293.6	265.4	270.7	225.0
67.5°	254.9	246.1	221.5	196.9	189.8
70°	207.4	196.9	188.1	161.7	154.7
72.5°	165.2	154.7	142.4	128.3	123.0
75°	124.8	116.0	109.0	103.7	114.3
77.5°	86.1	82.6	77.3	72.1	70.3
80°	56.3	54.5	52.7	51.0	49.2
82.5°	33.4	33.4	33.4	33.4	33.4
85°	17.6	19.3	21.1	22.9	24.6
87.5°	10.5	10.5	12.3	14.1	15.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)