

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: P560677

Luminaire Tested: FSR-12-2-LD4-2STD-40-UNV-93-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560677
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-12-2-LD4-2STD-40-UNV-93-86-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2992.0 lumens
Efficiency: N/A
Efficacy: 89.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

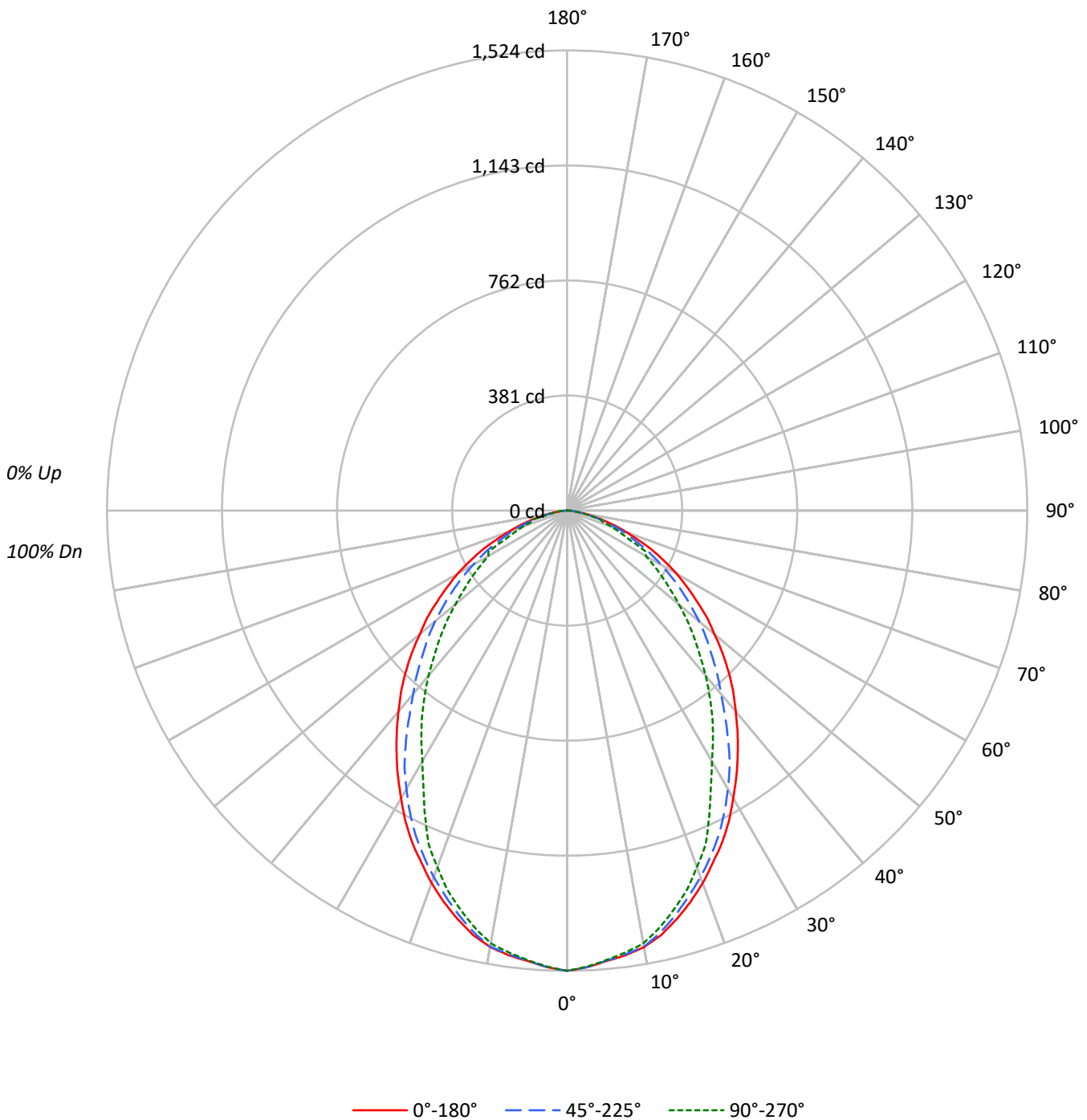
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	8203	8203	8203
5°	8091	8082	8072
10°	8021	8011	7954
15°	7804	7726	7618
20°	7518	7397	7195
25°	7209	7052	6613
30°	6833	6614	5957
35°	6471	6112	5510
40°	6102	5571	5014
45°	5753	5150	4532
50°	5326	4780	4042
55°	4927	4331	3621
60°	4513	3869	3243
65°	3972	3389	2872
70°	3271	2966	2441
75°	2601	2271	2381
80°	1748	1640	1528
85°	1087	1303	1525

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5753 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.9	4.7
10°-20°	389.4	13.0
20°-30°	539.0	18.0
30°-40°	574.8	19.2
40°-50°	524.4	17.5
50°-60°	410.8	13.7
60°-70°	267.7	8.9
70°-80°	118.6	4.0
80°-90°	25.5	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°	1070.3	35.8
0°-40°	1645.0	55.0
0°-60°	2580.2	86.2
0°-90°	2992.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2992.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1524	1524	1524	1524	1524	
5°	1498	1496	1496	1494	1494	142
15°	1401	1401	1387	1373	1367	394
25°	1214	1207	1188	1145	1114	557
35°	985	978	930	860	839	616
45°	756	740	677	620	596	582
55°	525	509	462	407	386	471
65°	312	294	266	271	226	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°	1524.1	1524.1	1524.1	1524.1	1524.1
2.5°	1513.5	1513.5	1513.5	1511.8	1511.8
5°	1497.7	1495.9	1495.9	1494.1	1494.1
7.5°	1485.3	1483.6	1481.8	1480.0	1476.5
10°	1467.7	1467.7	1465.9	1457.1	1455.4
12.5°	1439.5	1437.7	1430.7	1418.4	1414.8
15°	1400.7	1400.7	1386.7	1372.6	1367.3
17.5°	1358.5	1356.7	1339.1	1325.0	1317.9
20°	1312.7	1309.1	1291.5	1268.6	1256.3
22.5°	1261.6	1261.6	1240.4	1210.5	1198.1
25°	1214.0	1206.9	1187.6	1145.3	1113.6
27.5°	1159.4	1148.8	1127.6	1067.7	1030.7
30°	1099.5	1094.2	1064.2	986.7	958.5
32.5°	1043.1	1034.3	1002.5	921.5	898.6
35°	984.9	977.9	930.3	859.8	838.7
37.5°	926.8	918.0	858.1	801.7	775.3
40°	868.6	858.1	792.9	741.8	713.6
42.5°	814.0	799.9	736.5	681.9	650.2
45°	755.9	740.0	676.6	620.2	595.5
47.5°	697.7	683.6	625.5	567.3	539.2
50°	636.1	623.7	570.9	512.7	482.8
52.5°	585.0	565.6	514.5	456.3	431.7
55°	525.1	509.2	461.6	407.0	385.9
57.5°	470.4	454.6	410.5	359.4	341.8
60°	419.3	396.4	359.4	315.4	301.3
62.5°	363.0	345.3	313.6	276.6	294.2
65°	311.9	294.2	266.1	271.3	225.5
67.5°	255.5	246.7	222.0	197.3	190.3
70°	207.9	197.3	188.5	162.1	155.1
72.5°	165.6	155.1	142.7	128.6	123.3
75°	125.1	116.3	109.2	104.0	114.5
77.5°	86.3	82.8	77.5	72.2	70.5
80°	56.4	54.6	52.9	51.1	49.3
82.5°	33.5	33.5	33.5	33.5	33.5
85°	17.6	19.4	21.1	22.9	24.7
87.5°	10.6	10.6	12.3	14.1	15.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)