

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: P560751

Luminaire Tested: FSR-12-2-LD4-2STD-50-UNV-93-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560751
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-50-UNV-93-97-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3001.0 lumens
Efficiency: N/A
Efficacy: 90.1 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

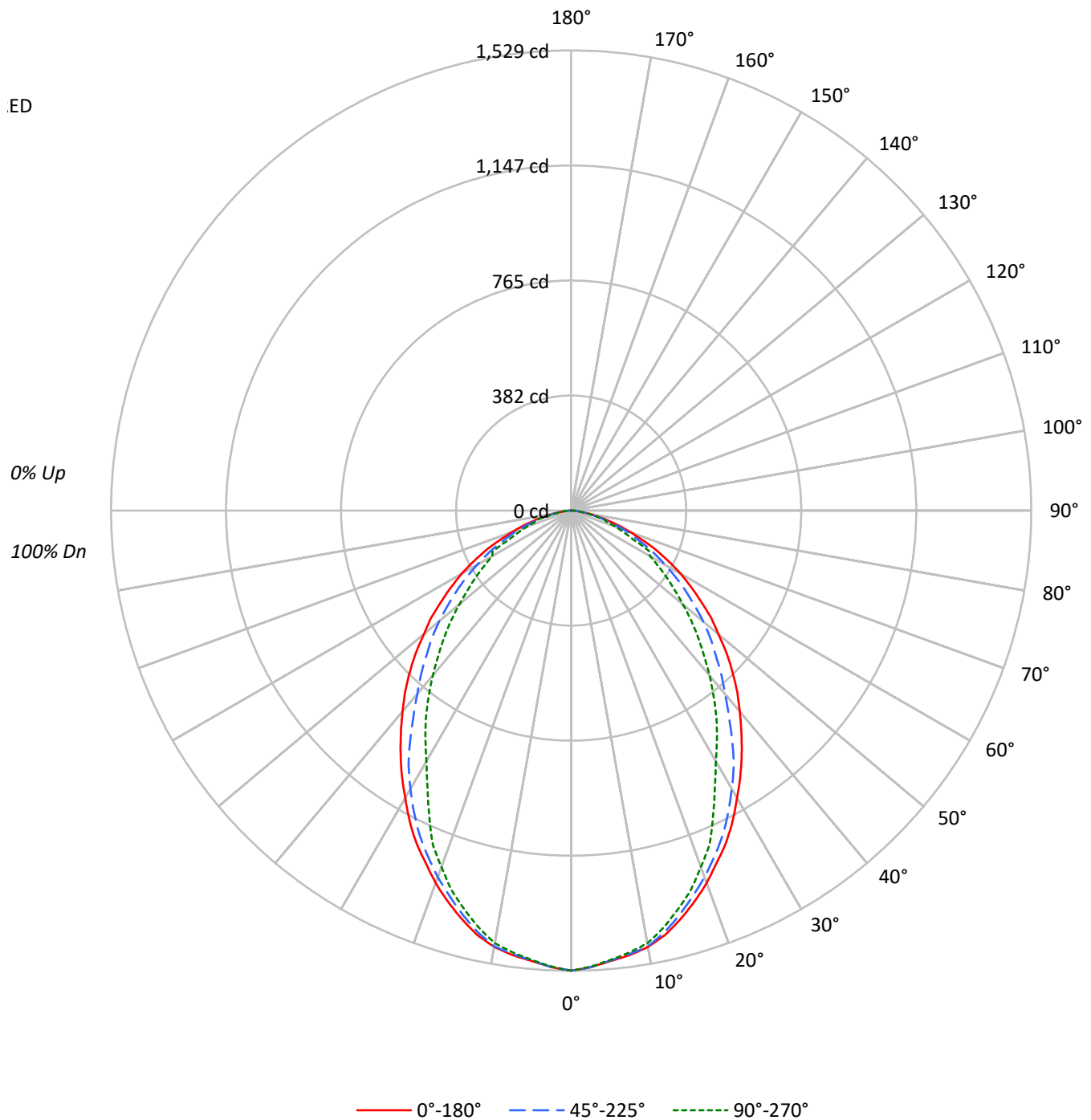
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87					87			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75					75			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65					65			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56					56			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50					50			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44					44			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40					40			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36					36			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33					33			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30					30			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8227	8227	8227
5°	8116	8106	8096
10°	8045	8036	7977
15°	7828	7749	7641
20°	7541	7419	7216
25°	7231	7073	6633
30°	6853	6633	5975
35°	6491	6131	5527
40°	6121	5587	5028
45°	5770	5165	4546
50°	5342	4794	4054
55°	4941	4344	3631
60°	4527	3880	3253
65°	3983	3399	2881
70°	3281	2976	2447
75°	2610	2279	2389
80°	1754	1643	1534
85°	1093	1309	1525

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5770 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.3	4.7
10°-20°	390.5	13.0
20°-30°	540.7	18.0
30°-40°	576.5	19.2
40°-50°	525.9	17.5
50°-60°	412.0	13.7
60°-70°	268.5	8.9
70°-80°	119.0	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°	1073.5	35.8
0°-40°	1650.0	55.0
0°-60°	2587.9	86.2
0°-90°	3001.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3001.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1529	1529	1529	1529	1529	
5°	1502	1500	1500	1499	1499	143
15°	1405	1405	1391	1377	1371	395
25°	1218	1211	1191	1149	1117	559
35°	988	981	933	862	841	618
45°	758	742	679	622	597	584
55°	527	511	463	408	387	472
65°	313	295	267	272	226	308
75°	126	117	110	104	115	134
85°	18	19	21	23	25	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1528.7	1528.7	1528.7	1528.7	1528.7
2.5°	1518.1	1518.1	1518.1	1516.3	1516.3
5°	1502.2	1500.4	1500.4	1498.6	1498.6
7.5°	1489.8	1488.0	1486.3	1484.5	1481.0
10°	1472.1	1472.1	1470.4	1461.5	1459.7
12.5°	1443.8	1442.1	1435.0	1422.6	1419.1
15°	1405.0	1405.0	1390.8	1376.7	1371.4
17.5°	1362.5	1360.8	1343.1	1329.0	1321.9
20°	1316.6	1313.1	1295.4	1272.4	1260.0
22.5°	1265.3	1265.3	1244.1	1214.1	1201.7
25°	1217.6	1210.6	1191.1	1148.7	1116.9
27.5°	1162.8	1152.2	1131.0	1071.0	1033.8
30°	1102.8	1097.5	1067.4	989.7	961.4
32.5°	1046.2	1037.4	1005.6	924.3	901.3
35°	987.9	980.8	933.1	862.4	841.2
37.5°	929.6	920.7	860.6	804.1	777.6
40°	871.3	860.6	795.3	744.0	715.7
42.5°	816.5	802.3	738.7	683.9	652.1
45°	758.1	742.2	678.6	622.1	597.3
47.5°	699.8	685.7	627.4	569.1	540.8
50°	638.0	625.6	572.6	514.3	484.2
52.5°	586.7	567.3	516.0	457.7	433.0
55°	526.6	510.7	463.0	408.2	387.0
57.5°	471.9	455.9	411.8	360.5	342.8
60°	420.6	397.6	360.5	316.3	302.2
62.5°	364.1	346.4	314.6	277.5	295.1
65°	312.8	295.1	266.9	272.2	226.2
67.5°	256.3	247.4	222.7	197.9	190.9
70°	208.5	197.9	189.1	162.6	155.5
72.5°	166.1	155.5	143.1	129.0	123.7
75°	125.5	116.6	109.6	104.3	114.9
77.5°	86.6	83.1	77.8	72.5	70.7
80°	56.6	54.8	53.0	51.3	49.5
82.5°	33.6	33.6	33.6	33.6	33.6
85°	17.7	19.4	21.2	23.0	24.7
87.5°	10.6	10.6	12.4	14.1	15.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)