

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: P560674

Luminaire Tested: FSR-12-2-LD4-2STD-40-UNV-93-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560674
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-93-85-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2543.0 lumens
Efficiency: N/A
Efficacy: 76.4 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

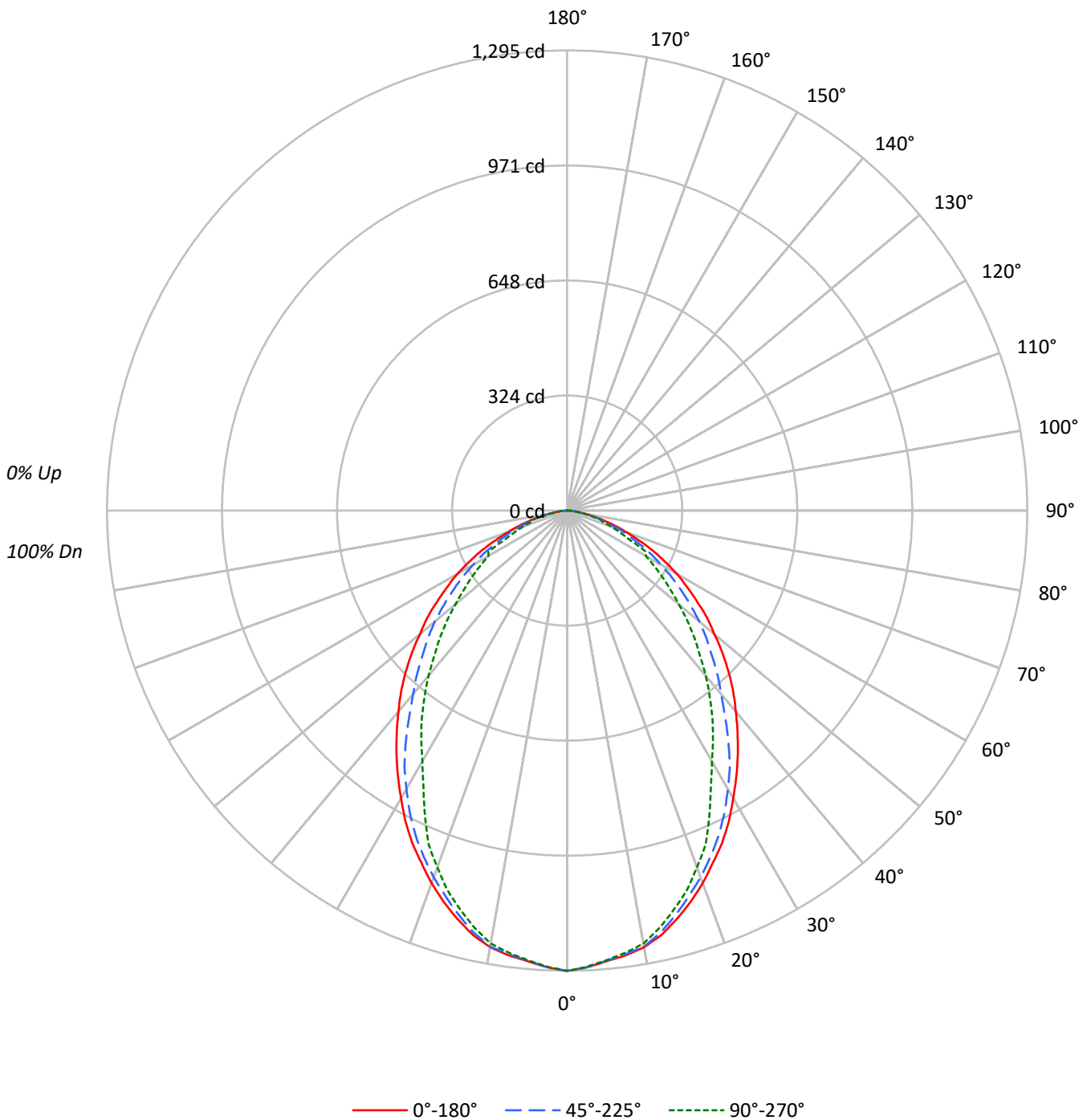
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6972	6972	6972
5°	6877	6869	6861
10°	6817	6809	6760
15°	6633	6567	6475
20°	6390	6287	6115
25°	6127	5994	5620
30°	5807	5621	5063
35°	5500	5195	4683
40°	5187	4735	4261
45°	4889	4377	3853
50°	4526	4063	3435
55°	4188	3682	3078
60°	3836	3288	2757
65°	3376	2879	2441
70°	2781	2521	2074
75°	2210	1930	2023
80°	1485	1392	1299
85°	926	1112	1297

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4889 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.6	4.7
10°-20°	330.9	13.0
20°-30°	458.1	18.0
30°-40°	488.5	19.2
40°-50°	445.7	17.5
50°-60°	349.2	13.7
60°-70°	227.6	8.9
70°-80°	100.8	4.0
80°-90°	21.7	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°	909.6	35.8
0°-40°	1398.2	55.0
0°-60°	2193.0	86.2
0°-90°	2543.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2543.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1295	1295	1295	1295	1295	
5°	1273	1271	1271	1270	1270	121
15°	1190	1190	1179	1167	1162	335
25°	1032	1026	1009	973	946	474
35°	837	831	791	731	713	523
45°	642	629	575	527	506	495
55°	446	433	392	346	328	400
65°	265	250	226	231	192	261
75°	106	99	93	88	97	114
85°	15	16	18	20	21	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1295.4	1295.4	1295.4	1295.4	1295.4
2.5°	1286.4	1286.4	1286.4	1284.9	1284.9
5°	1272.9	1271.4	1271.4	1269.9	1269.9
7.5°	1262.4	1260.9	1259.4	1257.9	1254.9
10°	1247.4	1247.4	1246.0	1238.5	1237.0
12.5°	1223.5	1222.0	1216.0	1205.5	1202.5
15°	1190.5	1190.5	1178.6	1166.6	1162.1
17.5°	1154.6	1153.1	1138.1	1126.1	1120.2
20°	1115.7	1112.7	1097.7	1078.2	1067.7
22.5°	1072.2	1072.2	1054.3	1028.8	1018.3
25°	1031.8	1025.8	1009.3	973.4	946.4
27.5°	985.4	976.4	958.4	907.5	876.1
30°	934.5	930.0	904.5	838.6	814.7
32.5°	886.5	879.1	852.1	783.2	763.7
35°	837.1	831.1	790.7	730.8	712.8
37.5°	787.7	780.2	729.3	681.4	658.9
40°	738.3	729.3	673.9	630.5	606.5
42.5°	691.9	679.9	626.0	579.5	552.6
45°	642.4	629.0	575.1	527.1	506.2
47.5°	593.0	581.0	531.6	482.2	458.2
50°	540.6	530.1	485.2	435.8	410.3
52.5°	497.2	480.7	437.3	387.9	366.9
55°	446.3	432.8	392.4	345.9	328.0
57.5°	399.8	386.4	348.9	305.5	290.5
60°	356.4	336.9	305.5	268.1	256.1
62.5°	308.5	293.5	266.6	235.1	250.1
65°	265.1	250.1	226.1	230.6	191.7
67.5°	217.1	209.7	188.7	167.7	161.7
70°	176.7	167.7	160.2	137.8	131.8
72.5°	140.8	131.8	121.3	109.3	104.8
75°	106.3	98.8	92.8	88.4	97.3
77.5°	73.4	70.4	65.9	61.4	59.9
80°	47.9	46.4	44.9	43.4	41.9
82.5°	28.5	28.5	28.5	28.5	28.5
85°	15.0	16.5	18.0	19.5	21.0
87.5°	9.0	9.0	10.5	12.0	13.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)