

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: P561004

Luminaire Tested: FSR-12-4-LD4-1LO-35-UNV-93-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561004
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-12-4-LD4-1LO-35-UNV-93-96-EDD-90
Description: 1X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2061.0 lumens
Efficiency: N/A
Efficacy: 88.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

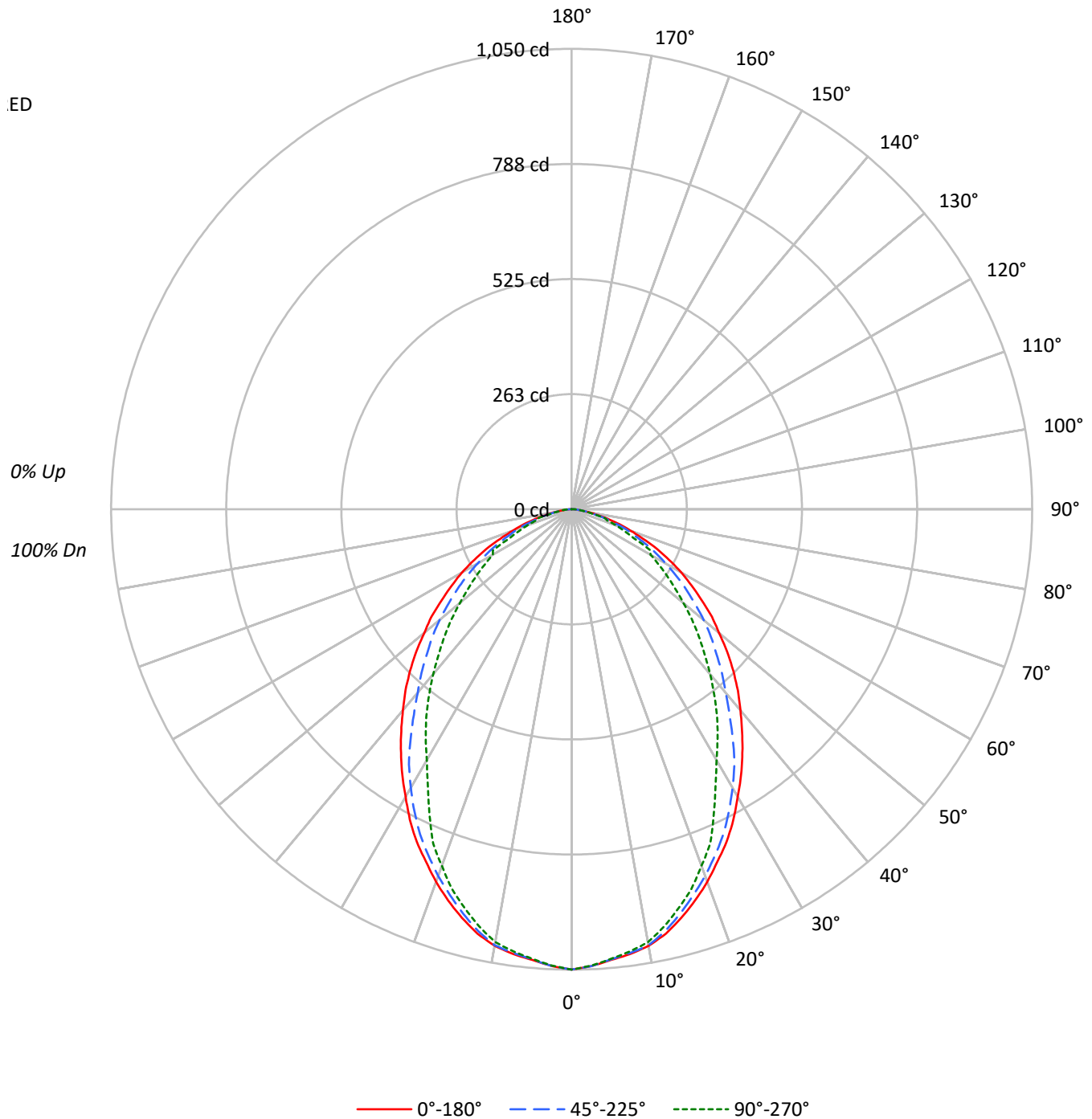
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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													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°	2825	2825	2825
5°	2787	2783	2780
10°	2763	2759	2739
15°	2688	2661	2624
20°	2589	2548	2478
25°	2483	2429	2278
30°	2353	2278	2051
35°	2229	2105	1898
40°	2102	1919	1727
45°	1982	1774	1561
50°	1834	1646	1392
55°	1697	1492	1247
60°	1555	1333	1117
65°	1368	1167	989
70°	1127	1022	840
75°	896	782	820
80°	601	564	527
85°	374	451	525

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1982 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.7	4.7
10°-20°	268.2	13.0
20°-30°	371.3	18.0
30°-40°	395.9	19.2
40°-50°	361.2	17.5
50°-60°	283.0	13.7
60°-70°	184.4	8.9
70°-80°	81.7	4.0
80°-90°	17.6	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°	737.2	35.8
0°-40°	1133.2	55.0
0°-60°	1777.3	86.2
0°-90°	2061.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2061.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1050	1050	1050	1050	1050	
5°	1032	1030	1030	1029	1029	98
15°	965	965	955	946	942	271
25°	836	831	818	789	767	384
35°	678	674	641	592	578	424
45°	521	510	466	427	410	401
55°	362	351	318	280	266	324
65°	215	203	183	187	155	212
75°	86	80	75	72	79	92
85°	12	13	15	16	17	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1049.8	1049.8	1049.8	1049.8	1049.8
2.5°	1042.6	1042.6	1042.6	1041.4	1041.4
5°	1031.6	1030.4	1030.4	1029.2	1029.2
7.5°	1023.1	1021.9	1020.7	1019.5	1017.1
10°	1011.0	1011.0	1009.8	1003.7	1002.5
12.5°	991.6	990.4	985.5	977.0	974.6
15°	964.9	964.9	955.2	945.5	941.8
17.5°	935.8	934.5	922.4	912.7	907.8
20°	904.2	901.8	889.6	873.9	865.4
22.5°	869.0	869.0	854.4	833.8	825.3
25°	836.2	831.4	818.0	788.9	767.1
27.5°	798.6	791.3	776.8	735.5	710.0
30°	757.3	753.7	733.1	679.7	660.2
32.5°	718.5	712.4	690.6	634.8	619.0
35°	678.5	673.6	640.8	592.3	577.7
37.5°	638.4	632.3	591.1	552.2	534.0
40°	598.4	591.1	546.2	511.0	491.5
42.5°	560.7	551.0	507.3	469.7	447.9
45°	520.7	509.8	466.1	427.2	410.2
47.5°	480.6	470.9	430.9	390.8	371.4
50°	438.1	429.6	393.2	353.2	332.6
52.5°	402.9	389.6	354.4	314.3	297.4
55°	361.7	350.8	318.0	280.4	265.8
57.5°	324.1	313.1	282.8	247.6	235.5
60°	288.9	273.1	247.6	217.3	207.5
62.5°	250.0	237.9	216.0	190.6	202.7
65°	214.8	202.7	183.3	186.9	155.4
67.5°	176.0	169.9	152.9	135.9	131.1
70°	143.2	135.9	129.9	111.7	106.8
72.5°	114.1	106.8	98.3	88.6	85.0
75°	86.2	80.1	75.2	71.6	78.9
77.5°	59.5	57.0	53.4	49.8	48.5
80°	38.8	37.6	36.4	35.2	34.0
82.5°	23.1	23.1	23.1	23.1	23.1
85°	12.1	13.4	14.6	15.8	17.0
87.5°	7.3	7.3	8.5	9.7	10.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)