

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: P561129

Luminaire Tested: FSR-12-4-LD4-1LO-50-UNV-93-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561129
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-50-UNV-93-88-EDD
Description: 1X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2155.0 lumens
Efficiency: N/A
Efficacy: 92.1 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

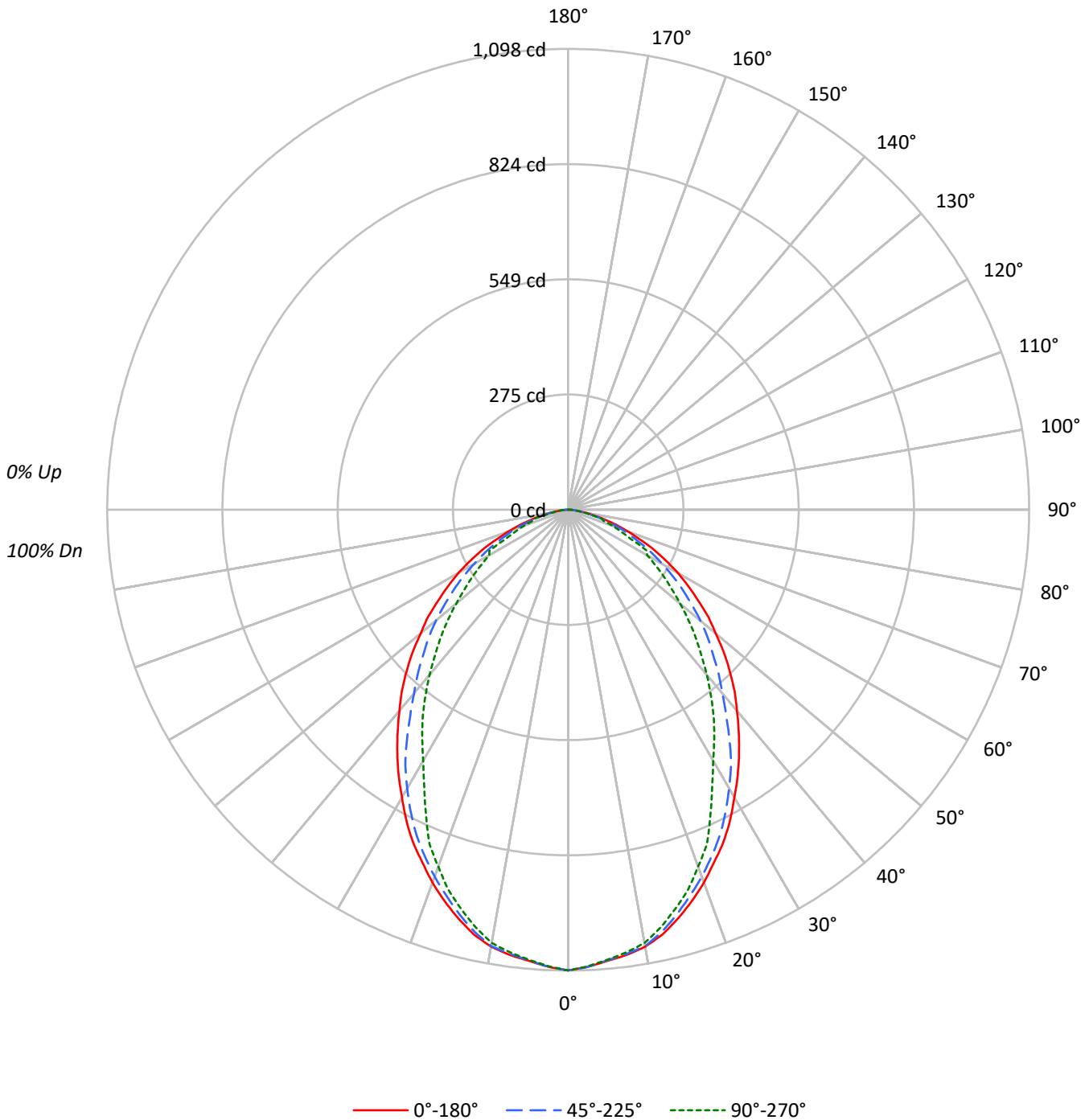
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2954	2954	2954
5°	2914	2910	2907
10°	2889	2885	2864
15°	2811	2782	2744
20°	2707	2664	2591
25°	2596	2540	2381
30°	2461	2382	2145
35°	2330	2201	1985
40°	2198	2006	1806
45°	2072	1854	1632
50°	1918	1721	1456
55°	1774	1560	1304
60°	1625	1393	1168
65°	1430	1220	1034
70°	1178	1068	879
75°	937	818	858
80°	629	590	550
85°	392	469	550

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2072 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.2	4.7
10°-20°	280.4	13.0
20°-30°	388.2	18.0
30°-40°	414.0	19.2
40°-50°	377.7	17.5
50°-60°	295.9	13.7
60°-70°	192.8	8.9
70°-80°	85.4	4.0
80°-90°	18.3	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°	770.9	35.8
0°-40°	1184.8	55.0
0°-60°	1858.4	86.2
0°-90°	2155.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2155.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1098	1098	1098	1098	1098	
5°	1079	1077	1077	1076	1076	102
15°	1009	1009	999	989	985	284
25°	874	869	855	825	802	401
35°	709	704	670	619	604	444
45°	544	533	487	447	429	419
55°	378	367	332	293	278	339
65°	225	212	192	195	162	221
75°	90	84	79	75	82	97
85°	13	14	15	16	18	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1097.7	1097.7	1097.7	1097.7	1097.7
2.5°	1090.1	1090.1	1090.1	1088.8	1088.8
5°	1078.7	1077.4	1077.4	1076.2	1076.2
7.5°	1069.8	1068.5	1067.3	1066.0	1063.5
10°	1057.1	1057.1	1055.8	1049.5	1048.2
12.5°	1036.8	1035.5	1030.5	1021.6	1019.0
15°	1008.9	1008.9	998.7	988.6	984.8
17.5°	978.4	977.2	964.5	954.3	949.2
20°	945.4	942.9	930.2	913.7	904.8
22.5°	908.6	908.6	893.4	871.8	863.0
25°	874.4	869.3	855.3	824.9	802.0
27.5°	835.0	827.4	812.2	769.0	742.4
30°	791.9	788.1	766.5	710.7	690.4
32.5°	751.3	744.9	722.1	663.7	647.2
35°	709.4	704.3	670.1	619.3	604.1
37.5°	667.5	661.2	618.0	577.4	558.4
40°	625.6	618.0	571.1	534.3	514.0
42.5°	586.3	576.1	530.5	491.1	468.3
45°	544.4	533.0	487.3	446.7	428.9
47.5°	502.5	492.4	450.5	408.6	388.3
50°	458.1	449.2	411.2	369.3	347.7
52.5°	421.3	407.4	370.6	328.7	310.9
55°	378.2	366.8	332.5	293.2	277.9
57.5°	338.8	327.4	295.7	258.9	246.2
60°	302.0	285.5	258.9	227.2	217.0
62.5°	261.4	248.7	225.9	199.2	211.9
65°	224.6	211.9	191.6	195.4	162.4
67.5°	184.0	177.7	159.9	142.1	137.1
70°	149.7	142.1	135.8	116.8	111.7
72.5°	119.3	111.7	102.8	92.6	88.8
75°	90.1	83.8	78.7	74.9	82.5
77.5°	62.2	59.6	55.8	52.0	50.8
80°	40.6	39.3	38.1	36.8	35.5
82.5°	24.1	24.1	24.1	24.1	24.1
85°	12.7	14.0	15.2	16.5	17.8
87.5°	7.6	7.6	8.9	10.2	11.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)