

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: P560559

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

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560559
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-LD4-2LO-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: 2241.0 lumens
Efficiency: N/A
Efficacy: 95.8 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

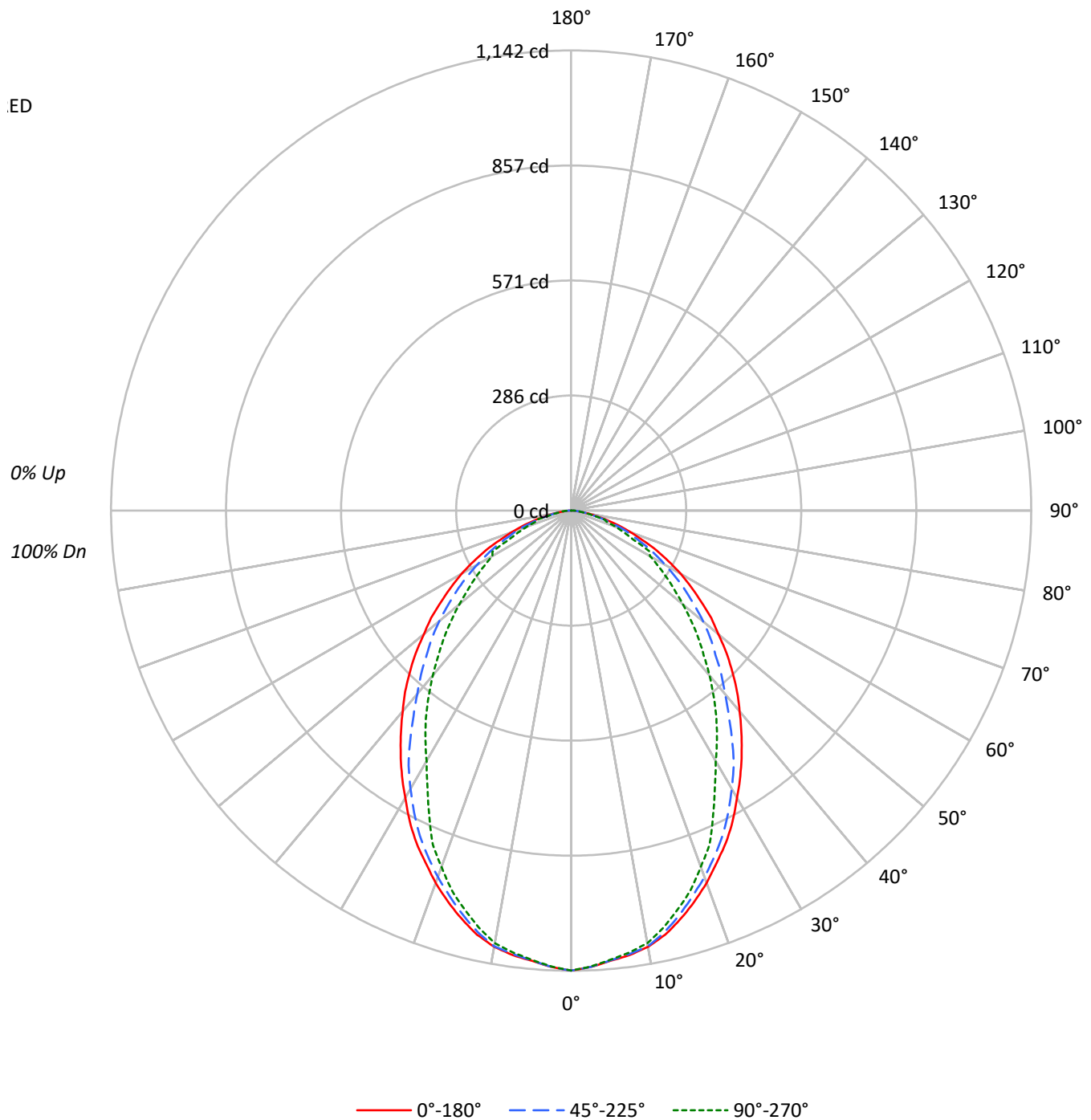
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6144	6144	6144
5°	6060	6053	6046
10°	6008	6001	5957
15°	5846	5787	5706
20°	5631	5540	5389
25°	5400	5282	4953
30°	5118	4954	4461
35°	4847	4578	4127
40°	4571	4173	3755
45°	4309	3857	3395
50°	3989	3580	3028
55°	3690	3245	2712
60°	3381	2898	2429
65°	2975	2538	2151
70°	2450	2222	1827
75°	1948	1701	1784
80°	1308	1227	1147
85°	815	976	1142

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4309 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.3	4.7
10°-20°	291.6	13.0
20°-30°	403.7	18.0
30°-40°	430.5	19.2
40°-50°	392.7	17.5
50°-60°	307.7	13.7
60°-70°	200.5	8.9
70°-80°	88.8	4.0
80°-90°	19.1	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°	801.6	35.8
0°-40°	1232.1	55.0
0°-60°	1932.5	86.2
0°-90°	2241.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2241.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1142	1142	1142	1142	1142	
5°	1122	1120	1120	1119	1119	106
15°	1049	1049	1039	1028	1024	295
25°	909	904	890	858	834	417
35°	738	732	697	644	628	461
45°	566	554	507	464	446	436
55°	393	381	346	305	289	353
65°	234	220	199	203	169	230
75°	94	87	82	78	86	100
85°	13	14	16	17	18	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1141.5	1141.5	1141.5	1141.5	1141.5
2.5°	1133.6	1133.6	1133.6	1132.3	1132.3
5°	1121.7	1120.4	1120.4	1119.1	1119.1
7.5°	1112.5	1111.2	1109.9	1108.5	1105.9
10°	1099.3	1099.3	1098.0	1091.4	1090.1
12.5°	1078.2	1076.9	1071.6	1062.4	1059.7
15°	1049.2	1049.2	1038.6	1028.0	1024.1
17.5°	1017.5	1016.2	1003.0	992.4	987.1
20°	983.2	980.5	967.3	950.2	940.9
22.5°	944.9	944.9	929.1	906.6	897.4
25°	909.3	904.0	889.5	857.8	834.0
27.5°	868.4	860.4	844.6	799.7	772.0
30°	823.5	819.5	797.1	739.0	717.9
32.5°	781.3	774.7	750.9	690.2	673.0
35°	737.7	732.4	696.8	644.0	628.2
37.5°	694.2	687.6	642.7	600.5	580.7
40°	650.6	642.7	593.9	555.6	534.5
42.5°	609.7	599.1	551.6	510.7	487.0
45°	566.1	554.3	506.8	464.5	446.1
47.5°	522.6	512.0	468.5	424.9	403.8
50°	476.4	467.2	427.6	384.0	361.6
52.5°	438.1	423.6	385.4	341.8	323.3
55°	393.3	381.4	345.8	304.8	289.0
57.5°	352.4	340.5	307.5	269.2	256.0
60°	314.1	296.9	269.2	236.2	225.7
62.5°	271.9	258.7	234.9	207.2	220.4
65°	233.6	220.4	199.3	203.2	168.9
67.5°	191.4	184.8	166.3	147.8	142.5
70°	155.7	147.8	141.2	121.4	116.1
72.5°	124.1	116.1	106.9	96.3	92.4
75°	93.7	87.1	81.8	77.9	85.8
77.5°	64.7	62.0	58.1	54.1	52.8
80°	42.2	40.9	39.6	38.3	37.0
82.5°	25.1	25.1	25.1	25.1	25.1
85°	13.2	14.5	15.8	17.2	18.5
87.5°	7.9	7.9	9.2	10.6	11.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)