

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: P560480

Luminaire Tested: FSR-12-2-LD4-2LO-40-UNV-93-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560480
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-40-UNV-93-84-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1937.0 lumens
Efficiency: N/A
Efficacy: 82.8 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

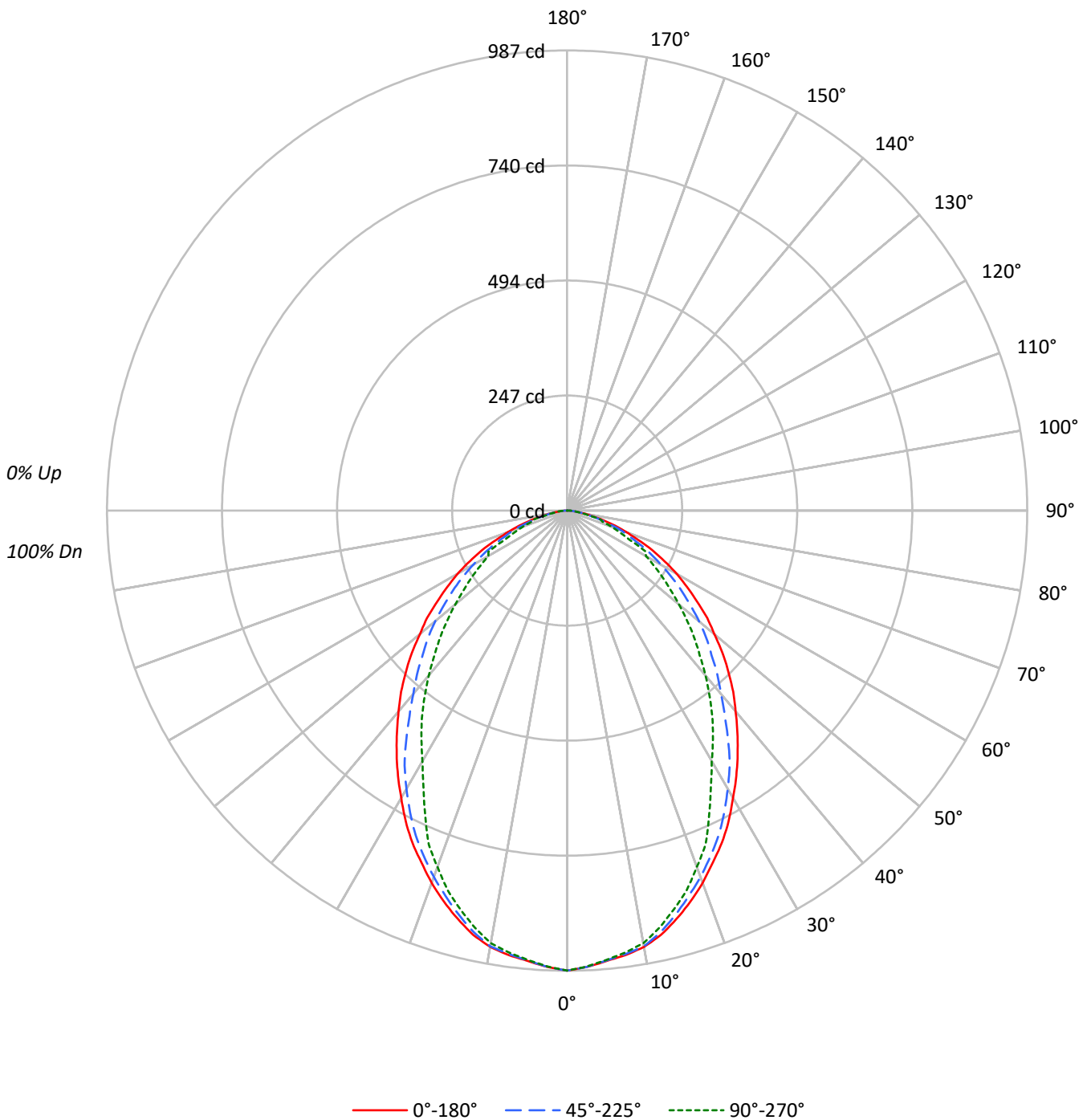
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5310	5310	5310
5°	5238	5232	5226
10°	5193	5186	5149
15°	5053	5002	4932
20°	4867	4789	4658
25°	4667	4565	4281
30°	4424	4282	3856
35°	4189	3957	3568
40°	3951	3606	3246
45°	3724	3334	2934
50°	3448	3095	2617
55°	3189	2805	2344
60°	2922	2505	2100
65°	2571	2193	1859
70°	2118	1921	1580
75°	1684	1470	1541
80°	1131	1060	989
85°	704	846	988

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3724 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.8	4.7
10°-20°	252.1	13.0
20°-30°	349.0	18.0
30°-40°	372.1	19.2
40°-50°	339.5	17.5
50°-60°	266.0	13.7
60°-70°	173.3	8.9
70°-80°	76.8	4.0
80°-90°	16.5	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°	692.9	35.8
0°-40°	1065.0	55.0
0°-60°	1670.4	86.2
0°-90°	1937.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1937.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	987	987	987	987	987	
5°	970	968	968	967	967	92
15°	907	907	898	889	885	255
25°	786	781	769	741	721	361
35°	638	633	602	557	543	399
45°	489	479	438	402	386	377
55°	340	330	299	264	250	305
65°	202	190	172	176	146	199
75°	81	75	71	67	74	87
85°	11	12	14	15	16	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	986.7	986.7	986.7	986.7	986.7
2.5°	979.8	979.8	979.8	978.7	978.7
5°	969.6	968.4	968.4	967.3	967.3
7.5°	961.6	960.4	959.3	958.2	955.9
10°	950.2	950.2	949.0	943.3	942.2
12.5°	931.9	930.8	926.2	918.2	916.0
15°	906.8	906.8	897.7	888.6	885.2
17.5°	879.5	878.3	866.9	857.8	853.2
20°	849.8	847.5	836.1	821.3	813.3
22.5°	816.7	816.7	803.0	783.6	775.7
25°	785.9	781.4	768.8	741.4	720.9
27.5°	750.6	743.7	730.0	691.2	667.3
30°	711.8	708.4	689.0	638.8	620.5
32.5°	675.3	669.6	649.0	596.6	581.7
35°	637.6	633.1	602.3	556.6	543.0
37.5°	600.0	594.3	555.5	519.0	501.9
40°	562.4	555.5	513.3	480.2	462.0
42.5°	527.0	517.9	476.8	441.4	420.9
45°	489.3	479.1	438.0	401.5	385.5
47.5°	451.7	442.6	404.9	367.3	349.0
50°	411.8	403.8	369.6	331.9	312.5
52.5°	378.7	366.2	333.1	295.4	279.5
55°	339.9	329.7	298.9	263.5	249.8
57.5°	304.6	294.3	265.8	232.7	221.3
60°	271.5	256.7	232.7	204.2	195.1
62.5°	235.0	223.6	203.0	179.1	190.5
65°	201.9	190.5	172.2	175.7	146.0
67.5°	165.4	159.7	143.7	127.8	123.2
70°	134.6	127.8	122.1	104.9	100.4
72.5°	107.2	100.4	92.4	83.3	79.8
75°	81.0	75.3	70.7	67.3	74.1
77.5°	55.9	53.6	50.2	46.8	45.6
80°	36.5	35.4	34.2	33.1	31.9
82.5°	21.7	21.7	21.7	21.7	21.7
85°	11.4	12.5	13.7	14.8	16.0
87.5°	6.8	6.8	8.0	9.1	10.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)