

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: P560458

Luminaire Tested: FSR-12-2-LD4-2LO-40-UNV-81-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560458
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-81-94-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1841.0 lumens
Efficiency: N/A
Efficacy: 78.7 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

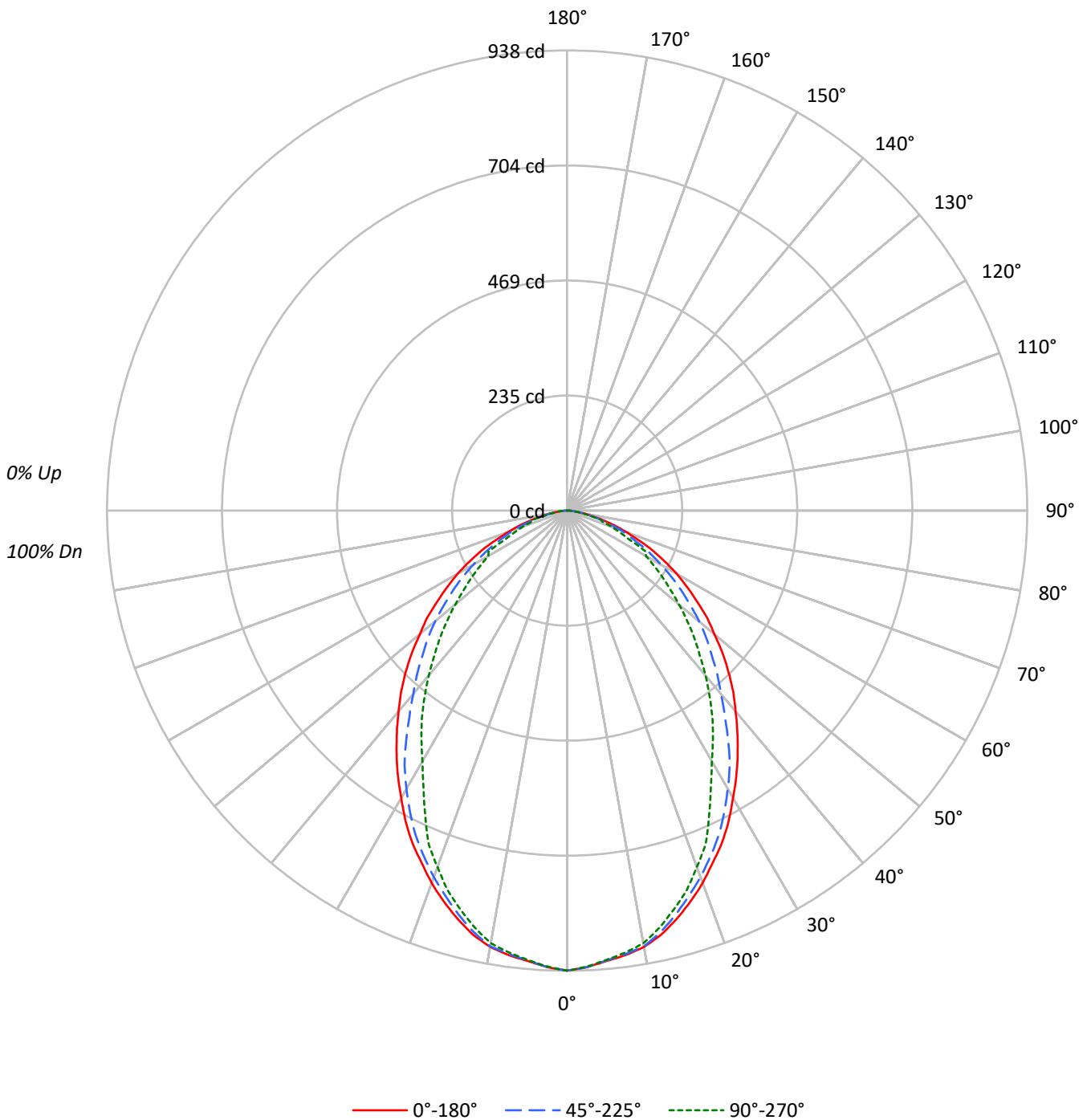
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5047	5047	5047
5°	4978	4972	4967
10°	4935	4929	4894
15°	4802	4754	4688
20°	4626	4552	4427
25°	4436	4339	4069
30°	4204	4069	3665
35°	3982	3761	3391
40°	3755	3428	3085
45°	3540	3169	2789
50°	3277	2941	2488
55°	3032	2665	2228
60°	2777	2381	1996
65°	2444	2085	1768
70°	2013	1825	1501
75°	1601	1397	1466
80°	1075	1007	942
85°	667	803	939

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3540 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.3	4.7
10°-20°	239.6	13.0
20°-30°	331.7	18.0
30°-40°	353.7	19.2
40°-50°	322.6	17.5
50°-60°	252.8	13.7
60°-70°	164.7	8.9
70°-80°	73.0	4.0
80°-90°	15.7	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°	658.5	35.8
0°-40°	1012.2	55.0
0°-60°	1587.6	86.2
0°-90°	1841.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1841.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	938	938	938	938	938	
5°	922	920	920	919	919	87
15°	862	862	853	844	841	242
25°	747	743	731	705	685	343
35°	606	602	572	529	516	379
45°	465	455	416	382	366	358
55°	323	313	284	250	237	290
65°	192	181	164	167	139	189
75°	77	72	67	64	70	82
85°	11	12	13	14	15	15
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	937.8	937.8	937.8	937.8	937.8
2.5°	931.3	931.3	931.3	930.2	930.2
5°	921.5	920.4	920.4	919.4	919.4
7.5°	913.9	912.8	911.8	910.7	908.5
10°	903.1	903.1	902.0	896.6	895.5
12.5°	885.7	884.7	880.3	872.7	870.6
15°	861.9	861.9	853.2	844.5	841.3
17.5°	835.9	834.8	823.9	815.3	810.9
20°	807.7	805.5	794.7	780.6	773.0
22.5°	776.2	776.2	763.2	744.8	737.2
25°	747.0	742.6	730.7	704.7	685.2
27.5°	713.4	706.9	693.8	657.0	634.2
30°	676.5	673.3	654.8	607.1	589.8
32.5°	641.8	636.4	616.9	567.0	552.9
35°	606.0	601.7	572.4	529.1	516.1
37.5°	570.3	564.8	528.0	493.3	477.0
40°	534.5	528.0	487.9	456.4	439.1
42.5°	500.9	492.2	453.2	419.6	400.0
45°	465.1	455.3	416.3	381.6	366.4
47.5°	429.3	420.6	384.9	349.1	331.7
50°	391.4	383.8	351.3	315.5	297.1
52.5°	359.9	348.0	316.6	280.8	265.6
55°	323.1	313.3	284.0	250.4	237.4
57.5°	289.5	279.7	252.6	221.2	210.3
60°	258.0	243.9	221.2	194.1	185.4
62.5°	223.3	212.5	193.0	170.2	181.1
65°	191.9	181.1	163.7	167.0	138.8
67.5°	157.2	151.8	136.6	121.4	117.1
70°	127.9	121.4	116.0	99.7	95.4
72.5°	101.9	95.4	87.8	79.1	75.9
75°	77.0	71.6	67.2	64.0	70.5
77.5°	53.1	51.0	47.7	44.4	43.4
80°	34.7	33.6	32.5	31.4	30.4
82.5°	20.6	20.6	20.6	20.6	20.6
85°	10.8	11.9	13.0	14.1	15.2
87.5°	6.5	6.5	7.6	8.7	9.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)