

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: P560454

Luminaire Tested: FSR-12-2-LD4-2LO-40-UNV-81-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560454
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-81-87-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1722.0 lumens
Efficiency: N/A
Efficacy: 73.6 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

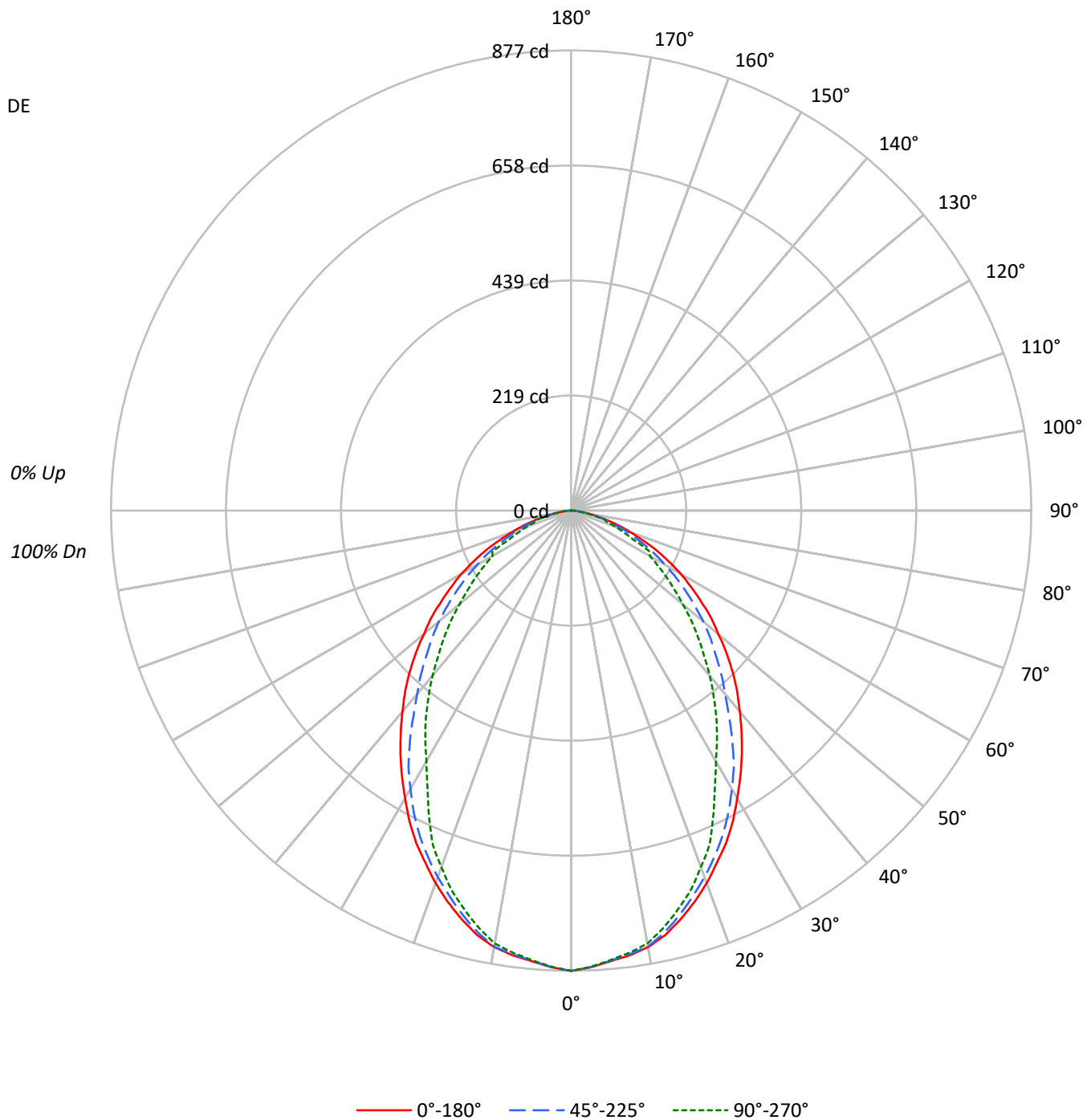
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4721	4721	4721
5°	4657	4651	4646
10°	4616	4611	4577
15°	4492	4447	4384
20°	4327	4257	4141
25°	4149	4059	3806
30°	3933	3806	3428
35°	3725	3518	3171
40°	3512	3206	2885
45°	3311	2964	2609
50°	3065	2751	2327
55°	2836	2493	2084
60°	2597	2227	1866
65°	2286	1950	1653
70°	1884	1707	1404
75°	1497	1308	1370
80°	1004	942	880
85°	624	753	877

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3311 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.7	4.7
10°-20°	224.1	13.0
20°-30°	310.2	18.0
30°-40°	330.8	19.2
40°-50°	301.8	17.5
50°-60°	236.4	13.7
60°-70°	154.1	8.9
70°-80°	68.3	4.0
80°-90°	14.7	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°	616.0	35.8
0°-40°	946.8	55.0
0°-60°	1485.0	86.2
0°-90°	1722.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1722.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	877	877	877	877	877	
5°	862	861	861	860	860	82
15°	806	806	798	790	787	227
25°	699	695	684	659	641	321
35°	567	563	535	495	483	354
45°	435	426	389	357	343	335
55°	302	293	266	234	222	271
65°	180	169	153	156	130	177
75°	72	67	63	60	66	77
85°	10	11	12	13	14	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	877.2	877.2	877.2	877.2	877.2
2.5°	871.1	871.1	871.1	870.1	870.1
5°	862.0	860.9	860.9	859.9	859.9
7.5°	854.9	853.8	852.8	851.8	849.8
10°	844.7	844.7	843.7	838.6	837.6
12.5°	828.5	827.5	823.4	816.3	814.3
15°	806.2	806.2	798.1	790.0	786.9
17.5°	781.8	780.8	770.7	762.6	758.5
20°	755.5	753.4	743.3	730.1	723.0
22.5°	726.1	726.1	713.9	696.7	689.6
25°	698.7	694.6	683.5	659.1	640.9
27.5°	667.3	661.2	649.0	614.5	593.2
30°	632.8	629.7	612.5	567.9	551.6
32.5°	600.3	595.3	577.0	530.4	517.2
35°	566.9	562.8	535.4	494.9	482.7
37.5°	533.4	528.3	493.8	461.4	446.2
40°	499.9	493.8	456.3	426.9	410.7
42.5°	468.5	460.4	423.9	392.4	374.2
45°	435.0	425.9	389.4	356.9	342.8
47.5°	401.6	393.5	360.0	326.5	310.3
50°	366.1	359.0	328.6	295.1	277.9
52.5°	336.7	325.5	296.1	262.6	248.4
55°	302.2	293.1	265.7	234.2	222.1
57.5°	270.8	261.6	236.3	206.9	196.7
60°	241.3	228.2	206.9	181.5	173.4
62.5°	208.9	198.8	180.5	159.2	169.3
65°	179.5	169.3	153.1	156.2	129.8
67.5°	147.0	142.0	127.8	113.6	109.5
70°	119.7	113.6	108.5	93.3	89.2
72.5°	95.3	89.2	82.1	74.0	71.0
75°	72.0	66.9	62.9	59.8	65.9
77.5°	49.7	47.7	44.6	41.6	40.6
80°	32.4	31.4	30.4	29.4	28.4
82.5°	19.3	19.3	19.3	19.3	19.3
85°	10.1	11.2	12.2	13.2	14.2
87.5°	6.1	6.1	7.1	8.1	9.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)