

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: P560404

Luminaire Tested: FSR-12-2-LD4-2LO-35-UNV-82-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560404
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-35-UNV-82-86-EDD-90
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1718.0 lumens
Efficiency: N/A
Efficacy: 73.4 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

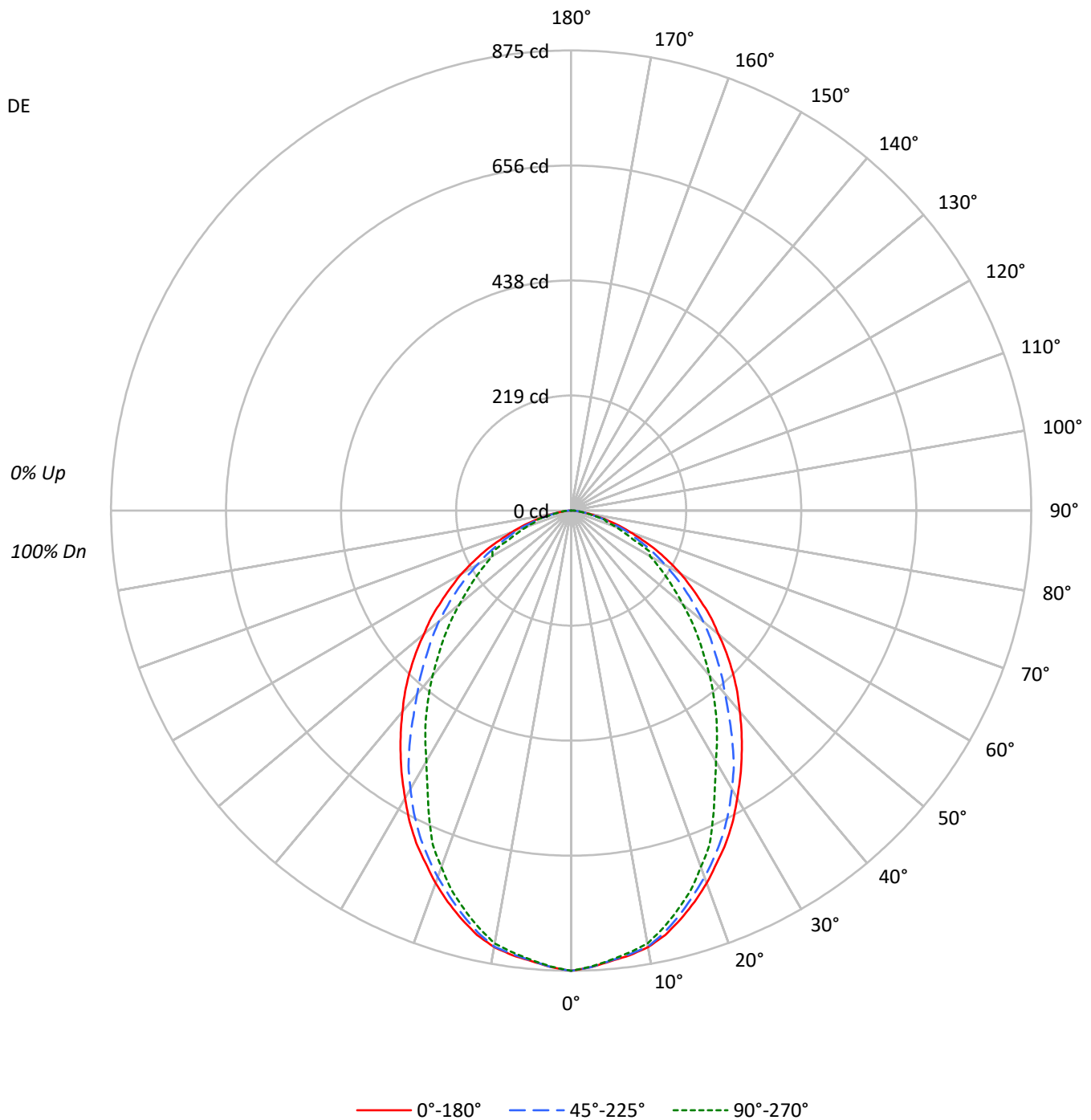
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4710	4710	4710
5°	4646	4640	4635
10°	4606	4600	4567
15°	4481	4436	4374
20°	4317	4247	4131
25°	4140	4049	3797
30°	3923	3798	3420
35°	3715	3510	3164
40°	3504	3199	2878
45°	3303	2957	2603
50°	3058	2745	2321
55°	2829	2487	2079
60°	2592	2222	1862
65°	2281	1946	1649
70°	1879	1704	1400
75°	1493	1304	1368
80°	1004	942	877
85°	624	747	877

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3303 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.5	4.7
10°-20°	223.6	13.0
20°-30°	309.5	18.0
30°-40°	330.0	19.2
40°-50°	301.1	17.5
50°-60°	235.9	13.7
60°-70°	153.7	8.9
70°-80°	68.1	4.0
80°-90°	14.6	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
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0°-30°	614.5	35.8
0°-40°	944.6	55.0
0°-60°	1481.5	86.2
0°-90°	1718.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1718.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	875	875	875	875	875	
5°	860	859	859	858	858	82
15°	804	804	796	788	785	226
25°	697	693	682	658	639	320
35°	566	562	534	494	482	354
45°	434	425	388	356	342	334
55°	302	292	265	234	222	270
65°	179	169	153	156	130	176
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°	875.1	875.1	875.1	875.1	875.1
2.5°	869.1	869.1	869.1	868.0	868.0
5°	860.0	858.9	858.9	857.9	857.9
7.5°	852.9	851.9	850.8	849.8	847.8
10°	842.8	842.8	841.7	836.7	835.7
12.5°	826.6	825.6	821.5	814.4	812.4
15°	804.3	804.3	796.2	788.1	785.1
17.5°	780.0	779.0	768.9	760.8	756.8
20°	753.7	751.7	741.6	728.4	721.3
22.5°	724.4	724.4	712.2	695.0	688.0
25°	697.1	693.0	681.9	657.6	639.4
27.5°	665.7	659.6	647.5	613.1	591.8
30°	631.3	628.3	611.1	566.6	550.4
32.5°	598.9	593.9	575.7	529.1	516.0
35°	565.5	561.5	534.2	493.7	481.6
37.5°	532.2	527.1	492.7	460.3	445.2
40°	498.8	492.7	455.3	425.9	409.7
42.5°	467.4	459.3	422.9	391.5	373.3
45°	434.0	424.9	388.5	356.1	342.0
47.5°	400.6	392.5	359.2	325.8	309.6
50°	365.2	358.1	327.8	294.4	277.2
52.5°	335.9	324.8	295.4	262.0	247.9
55°	301.5	292.4	265.1	233.7	221.6
57.5°	270.1	261.0	235.7	206.4	196.3
60°	240.8	227.6	206.4	181.1	173.0
62.5°	208.4	198.3	180.1	158.8	169.0
65°	179.1	169.0	152.8	155.8	129.5
67.5°	146.7	141.6	127.5	113.3	109.3
70°	119.4	113.3	108.3	93.1	89.0
72.5°	95.1	89.0	81.9	73.9	70.8
75°	71.8	66.8	62.7	59.7	65.8
77.5°	49.6	47.6	44.5	41.5	40.5
80°	32.4	31.4	30.4	29.3	28.3
82.5°	19.2	19.2	19.2	19.2	19.2
85°	10.1	11.1	12.1	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)