

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: P560067

Luminaire Tested: FSR-12-2-LD4-1STD-40-UNV-81-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560067
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-LD4-1STD-40-UNV-81-85-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1435.0 lumens
Efficiency: N/A
Efficacy: 86.4 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

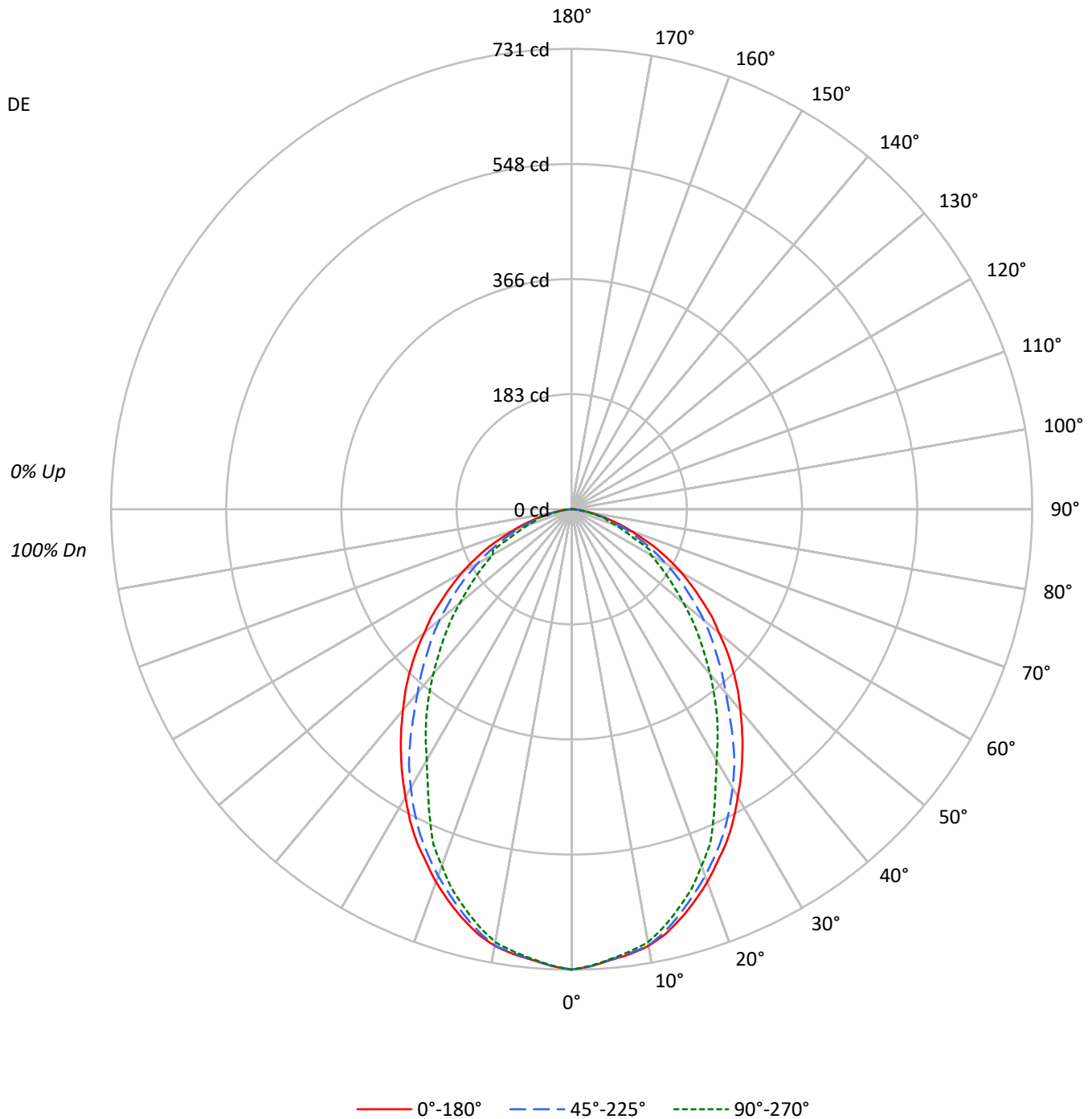
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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°	3934	3934	3934
5°	3881	3876	3871
10°	3847	3842	3815
15°	3743	3706	3654
20°	3606	3548	3451
25°	3457	3382	3172
30°	3277	3172	2857
35°	3104	2932	2643
40°	2927	2672	2404
45°	2759	2470	2174
50°	2555	2292	1938
55°	2363	2077	1737
60°	2165	1856	1555
65°	1905	1625	1378
70°	1569	1423	1171
75°	1248	1090	1142
80°	837	787	735
85°	525	624	729

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2759 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.0	4.7
10°-20°	186.7	13.0
20°-30°	258.5	18.0
30°-40°	275.7	19.2
40°-50°	251.5	17.5
50°-60°	197.0	13.7
60°-70°	128.4	8.9
70°-80°	56.9	4.0
80°-90°	12.2	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°	513.3	35.8
0°-40°	789.0	55.0
0°-60°	1237.5	86.2
0°-90°	1435.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1435.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	731	731	731	731	731	
5°	718	717	717	717	717	68
15°	672	672	665	658	656	189
25°	582	579	570	549	534	267
35°	472	469	446	412	402	295
45°	362	355	324	298	286	279
55°	252	244	221	195	185	226
65°	150	141	128	130	108	147
75°	60	56	52	50	55	64
85°	8	9	10	11	12	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	731.0	731.0	731.0	731.0	731.0
2.5°	725.9	725.9	725.9	725.1	725.1
5°	718.3	717.4	717.4	716.6	716.6
7.5°	712.4	711.5	710.7	709.8	708.2
10°	703.9	703.9	703.1	698.9	698.0
12.5°	690.4	689.6	686.2	680.3	678.6
15°	671.8	671.8	665.1	658.3	655.8
17.5°	651.5	650.7	642.2	635.5	632.1
20°	629.6	627.9	619.4	608.4	602.5
22.5°	605.1	605.1	594.9	580.6	574.6
25°	582.2	578.9	569.6	549.3	534.1
27.5°	556.0	551.0	540.8	512.1	494.4
30°	527.3	524.8	510.4	473.2	459.7
32.5°	500.3	496.0	480.8	442.0	431.0
35°	472.4	469.0	446.2	412.4	402.2
37.5°	444.5	440.3	411.5	384.5	371.8
40°	416.6	411.5	380.3	355.8	342.2
42.5°	390.4	383.7	353.2	327.0	311.8
45°	362.5	354.9	324.5	297.5	285.6
47.5°	334.6	327.9	300.0	272.1	258.6
50°	305.1	299.1	273.8	245.9	231.5
52.5°	280.6	271.3	246.8	218.9	207.0
55°	251.8	244.2	221.4	195.2	185.1
57.5°	225.6	218.0	196.9	172.4	163.9
60°	201.1	190.1	172.4	151.3	144.5
62.5°	174.1	165.6	150.4	132.7	141.1
65°	149.6	141.1	127.6	130.1	108.2
67.5°	122.5	118.3	106.5	94.6	91.3
70°	99.7	94.6	90.4	77.7	74.4
72.5°	79.4	74.4	68.4	61.7	59.2
75°	60.0	55.8	52.4	49.9	54.9
77.5°	41.4	39.7	37.2	34.6	33.8
80°	27.0	26.2	25.4	24.5	23.7
82.5°	16.1	16.1	16.1	16.1	16.1
85°	8.5	9.3	10.1	11.0	11.8
87.5°	5.1	5.1	5.9	6.8	7.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)