

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: P560069

Luminaire Tested: FSR-12-2-LD4-1STD-40-UNV-81-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560069
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-81-86-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1418.0 lumens
Efficiency: N/A
Efficacy: 85.4 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

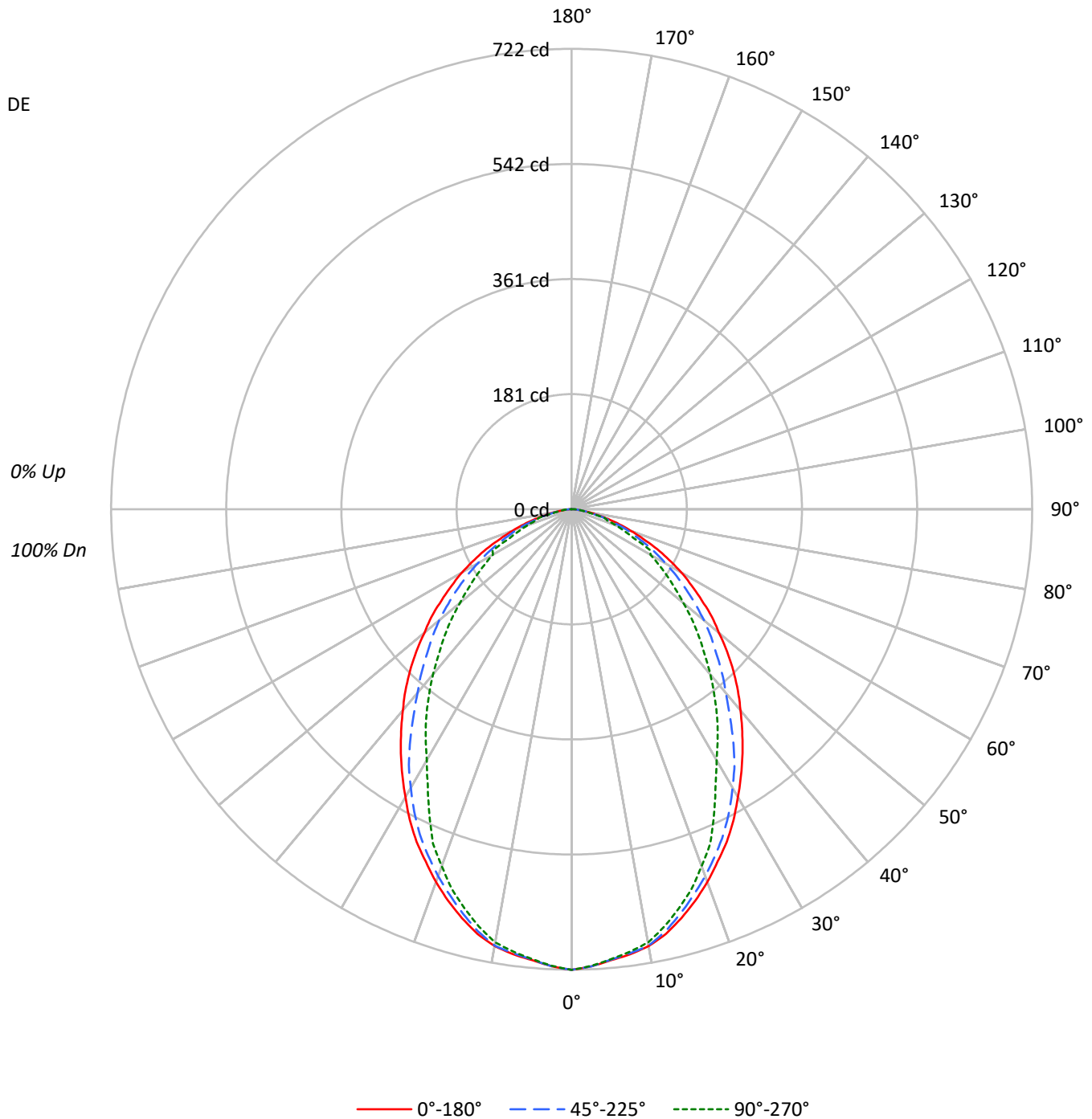
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3887	3887	3887
5°	3835	3830	3826
10°	3801	3797	3769
15°	3699	3662	3611
20°	3563	3506	3410
25°	3416	3342	3134
30°	3238	3135	2823
35°	3067	2897	2612
40°	2892	2640	2376
45°	2726	2441	2148
50°	2524	2266	1916
55°	2335	2053	1716
60°	2139	1833	1537
65°	1882	1606	1361
70°	1550	1405	1157
75°	1233	1077	1129
80°	828	778	725
85°	519	618	722

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2726 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.2	4.7
10°-20°	184.5	13.0
20°-30°	255.5	18.0
30°-40°	272.4	19.2
40°-50°	248.5	17.5
50°-60°	194.7	13.7
60°-70°	126.9	8.9
70°-80°	56.2	4.0
80°-90°	12.1	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°	507.2	35.8
0°-40°	779.6	55.0
0°-60°	1222.8	86.2
0°-90°	1418.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1418.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	722	722	722	722	722	
5°	710	709	709	708	708	67
15°	664	664	657	650	648	187
25°	575	572	563	543	528	264
35°	467	463	441	408	398	292
45°	358	351	321	294	282	276
55°	249	241	219	193	183	223
65°	148	140	126	129	107	146
75°	59	55	52	49	54	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°	722.3	722.3	722.3	722.3	722.3
2.5°	717.3	717.3	717.3	716.5	716.5
5°	709.8	708.9	708.9	708.1	708.1
7.5°	703.9	703.1	702.3	701.4	699.8
10°	695.6	695.6	694.8	690.6	689.7
12.5°	682.2	681.4	678.1	672.2	670.5
15°	663.9	663.9	657.2	650.5	648.0
17.5°	643.8	643.0	634.6	628.0	624.6
20°	622.1	620.4	612.1	601.2	595.4
22.5°	597.9	597.9	587.9	573.7	567.8
25°	575.3	572.0	562.8	542.8	527.7
27.5°	549.5	544.4	534.4	506.0	488.5
30°	521.1	518.6	504.4	467.6	454.3
32.5°	494.3	490.2	475.1	436.7	425.9
35°	466.8	463.4	440.9	407.5	397.5
37.5°	439.2	435.1	406.7	379.9	367.4
40°	411.7	406.7	375.8	351.6	338.2
42.5°	385.8	379.1	349.0	323.2	308.1
45°	358.2	350.7	320.7	293.9	282.2
47.5°	330.7	324.0	296.4	268.9	255.5
50°	301.4	295.6	270.6	243.0	228.8
52.5°	277.2	268.0	243.8	216.3	204.6
55°	248.8	241.3	218.8	192.9	182.9
57.5°	223.0	215.4	194.6	170.3	162.0
60°	198.7	187.9	170.3	149.5	142.8
62.5°	172.0	163.7	148.6	131.1	139.5
65°	147.8	139.5	126.1	128.6	106.9
67.5°	121.1	116.9	105.2	93.5	90.2
70°	98.5	93.5	89.3	76.8	73.5
72.5°	78.5	73.5	67.6	61.0	58.5
75°	59.3	55.1	51.8	49.3	54.3
77.5°	40.9	39.2	36.7	34.2	33.4
80°	26.7	25.9	25.1	24.2	23.4
82.5°	15.9	15.9	15.9	15.9	15.9
85°	8.4	9.2	10.0	10.9	11.7
87.5°	5.0	5.0	5.8	6.7	7.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)