

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: P590110

Luminaire Tested: FSR-24-2-LD4-1STD-50-UNV-81-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590110
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-1STD-50-UNV-81-85-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1866.0 lumens
Efficiency: N/A
Efficacy: 112.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

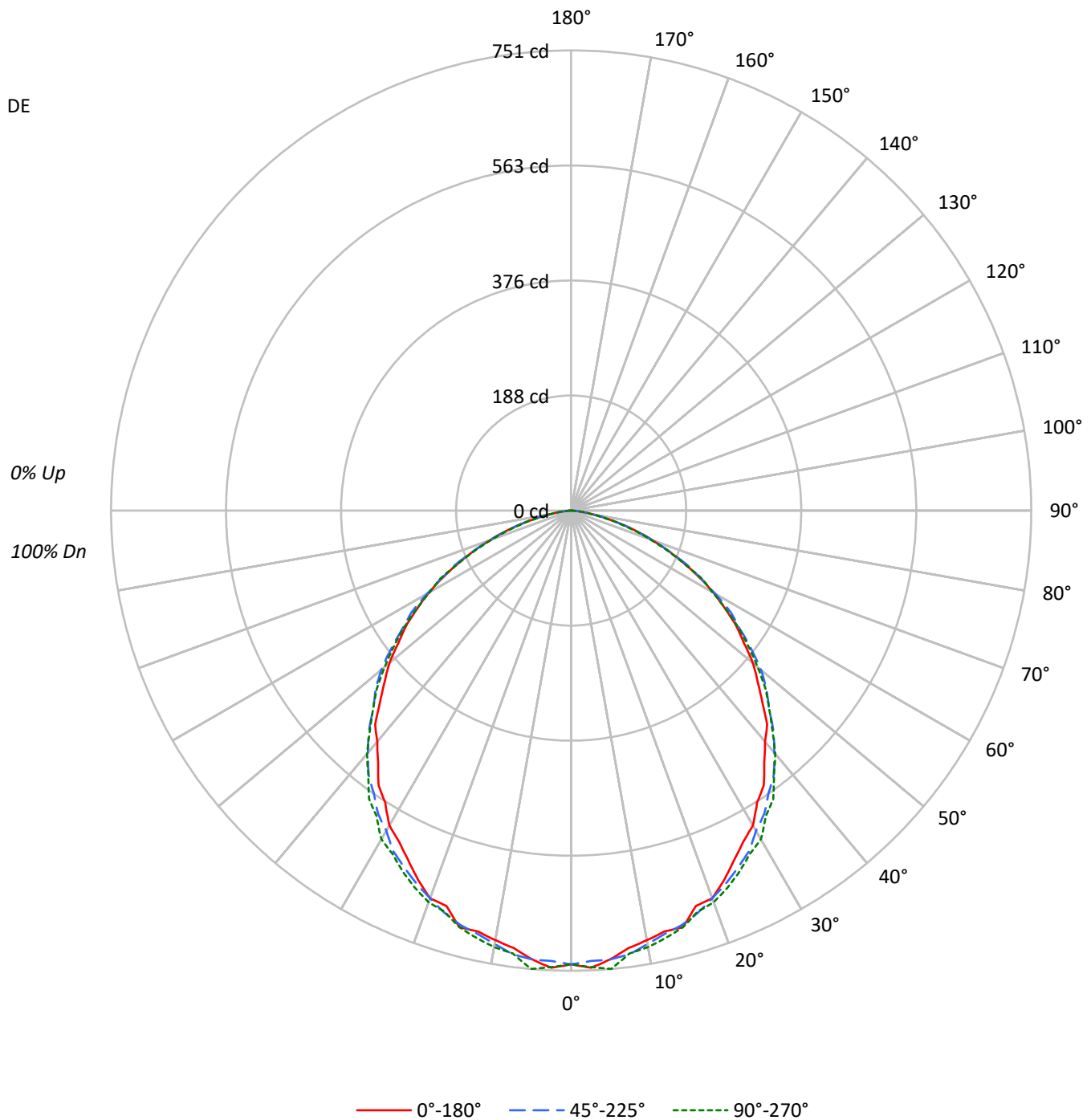
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1992	1992	1992
5°	1986	1987	2028
10°	1946	1962	1976
15°	1961	1950	1961
20°	1928	1928	1948
25°	1868	1909	1930
30°	1843	1875	1925
35°	1800	1847	1888
40°	1729	1813	1821
45°	1677	1737	1739
50°	1622	1695	1663
55°	1545	1575	1564
60°	1445	1460	1433
65°	1289	1321	1279
70°	1105	1109	1079
75°	875	873	840
80°	587	570	549
85°	318	315	296

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1781 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.6	3.7
10°-20°	197.4	10.6
20°-30°	295.7	15.8
30°-40°	350.5	18.8
40°-50°	351.1	18.8
50°-60°	298.0	16.0
60°-70°	200.9	10.8
70°-80°	88.3	4.7
80°-90°	14.3	0.8
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°	562.7	30.2
0°-40°	913.2	48.9
0°-60°	1562.4	83.7
0°-90°	1866.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1866.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	740	740	740	740	740	
5°	735	733	735	733	751	69
15°	704	696	700	704	704	196
25°	629	633	643	652	650	291
35°	548	549	562	575	575	340
45°	441	449	456	468	457	341
55°	329	327	336	334	333	293
65°	202	200	208	200	201	201
75°	84	82	84	78	81	90
85°	10	10	10	10	10	15
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	740.4	740.4	740.4	740.4	740.4
2.5°	746.8	741.1	735.9	742.0	745.7
5°	735.1	733.4	735.4	733.2	750.9
7.5°	720.0	726.6	730.4	728.0	729.1
10°	712.0	709.7	718.2	724.1	723.3
12.5°	703.4	706.8	707.3	713.7	714.3
15°	703.9	695.7	700.0	703.7	704.0
17.5°	676.5	685.3	688.3	696.6	686.3
20°	673.2	666.8	673.2	681.7	680.3
22.5°	652.6	645.5	659.2	666.8	666.3
25°	629.3	632.7	643.1	651.5	650.1
27.5°	608.8	612.9	627.6	639.1	631.7
30°	593.1	591.1	603.5	613.8	619.5
32.5°	564.9	572.1	586.7	596.9	591.4
35°	547.8	549.4	562.1	575.1	574.7
37.5°	517.8	525.4	543.3	546.9	543.6
40°	492.3	499.9	516.0	519.9	518.3
42.5°	473.5	474.8	488.7	493.2	486.0
45°	440.7	448.9	456.4	468.1	457.0
47.5°	412.8	416.6	432.7	435.8	430.0
50°	387.4	388.8	404.9	401.0	397.2
52.5°	355.6	361.3	370.3	369.6	365.1
55°	329.4	327.2	335.8	333.5	333.4
57.5°	298.0	301.8	308.9	305.2	299.4
60°	268.5	268.6	271.2	267.1	266.3
62.5°	235.7	236.9	237.5	232.4	240.6
65°	202.4	199.7	207.5	199.6	200.9
67.5°	171.7	173.0	172.3	167.3	169.2
70°	140.5	142.2	141.0	135.4	137.1
72.5°	112.0	109.9	111.3	104.2	107.4
75°	84.2	82.5	84.0	78.1	80.8
77.5°	57.4	58.7	57.7	54.6	56.4
80°	37.9	36.8	36.8	35.0	35.4
82.5°	22.1	21.0	20.7	20.2	21.0
85°	10.3	10.0	10.2	9.9	9.6
87.5°	3.7	3.8	3.8	3.6	3.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)