

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: P590067

Luminaire Tested: FSR-24-2-LD4-1STD-35-UNV-93-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590067
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-35-UNV-93-96-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1938.0 lumens
Efficiency: N/A
Efficacy: 116.7 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

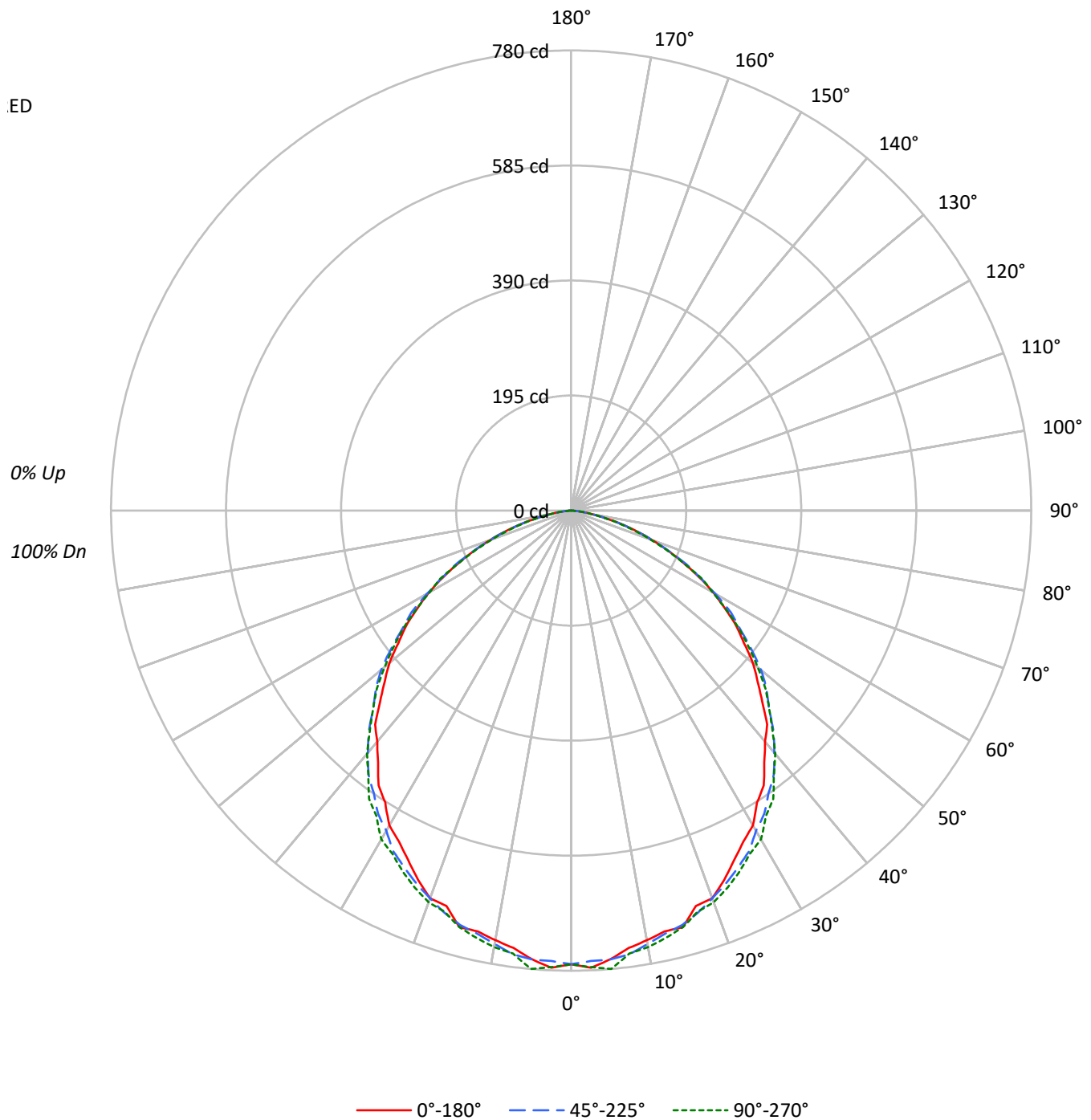
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2069	2069	2069
5°	2062	2063	2107
10°	2021	2038	2053
15°	2036	2026	2037
20°	2002	2002	2023
25°	1941	1983	2005
30°	1914	1948	2000
35°	1869	1918	1961
40°	1796	1883	1891
45°	1742	1804	1807
50°	1685	1761	1727
55°	1605	1636	1625
60°	1501	1516	1489
65°	1338	1372	1329
70°	1148	1152	1120
75°	910	908	872
80°	609	592	569
85°	330	327	306

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1850 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.3	3.7
10°-20°	205.0	10.6
20°-30°	307.1	15.8
30°-40°	364.0	18.8
40°-50°	364.7	18.8
50°-60°	309.6	16.0
60°-70°	208.7	10.8
70°-80°	91.7	4.7
80°-90°	14.9	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°	584.5	30.2
0°-40°	948.5	48.9
0°-60°	1622.7	83.7
0°-90°	1938.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1938.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	769	769	769	769	769	
5°	764	762	764	762	780	72
15°	731	723	727	731	731	204
25°	654	657	668	677	675	302
35°	569	571	584	597	597	353
45°	458	466	474	486	475	354
55°	342	340	349	346	346	304
65°	210	207	216	207	209	209
75°	88	86	87	81	84	94
85°	11	10	11	10	10	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	768.9	768.9	768.9	768.9	768.9
2.5°	775.6	769.7	764.3	770.6	774.5
5°	763.5	761.7	763.8	761.5	779.9
7.5°	747.8	754.7	758.6	756.1	757.2
10°	739.5	737.1	745.9	752.1	751.2
12.5°	730.5	734.1	734.6	741.2	741.8
15°	731.0	722.6	727.1	730.8	731.1
17.5°	702.6	711.8	714.8	723.5	712.8
20°	699.2	692.5	699.2	708.0	706.6
22.5°	677.8	670.4	684.7	692.5	692.0
25°	653.6	657.2	667.9	676.6	675.2
27.5°	632.3	636.5	651.8	663.8	656.1
30°	616.0	613.9	626.8	637.5	643.5
32.5°	586.7	594.2	609.3	619.9	614.3
35°	568.9	570.6	583.8	597.3	596.9
37.5°	537.8	545.7	564.2	568.0	564.5
40°	511.3	519.2	535.9	540.0	538.3
42.5°	491.8	493.1	507.5	512.2	504.8
45°	457.7	466.2	474.0	486.2	474.7
47.5°	428.7	432.7	449.4	452.6	446.6
50°	402.4	403.8	420.6	416.5	412.5
52.5°	369.3	375.2	384.6	383.8	379.2
55°	342.1	339.8	348.8	346.4	346.3
57.5°	309.5	313.4	320.8	317.0	311.0
60°	278.9	279.0	281.7	277.4	276.6
62.5°	244.8	246.0	246.6	241.4	249.9
65°	210.2	207.4	215.5	207.3	208.7
67.5°	178.3	179.7	178.9	173.7	175.7
70°	145.9	147.7	146.4	140.6	142.4
72.5°	116.4	114.2	115.6	108.2	111.6
75°	87.5	85.7	87.3	81.1	83.9
77.5°	59.6	61.0	60.0	56.7	58.6
80°	39.3	38.2	38.2	36.3	36.7
82.5°	22.9	21.8	21.5	20.9	21.8
85°	10.7	10.4	10.6	10.3	9.9
87.5°	3.9	4.0	4.0	3.8	3.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)