

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: P590039

Luminaire Tested: FSR-24-2-LD4-1STD-35-UNV-80-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590039
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-80-86-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1891.0 lumens
Efficiency: N/A
Efficacy: 113.9 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

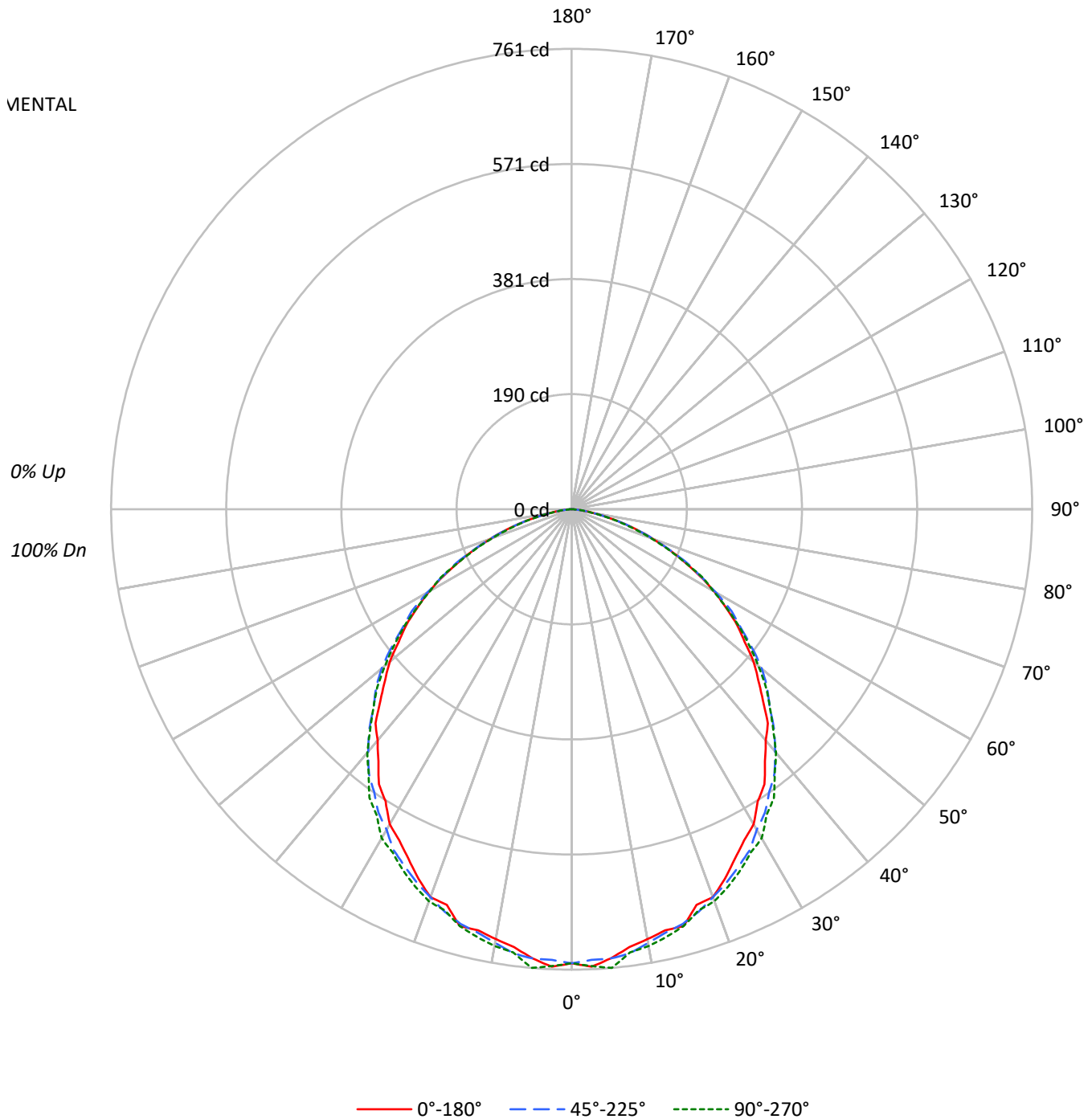
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2019	2019	2019
5°	2012	2013	2056
10°	1971	1989	2003
15°	1987	1976	1987
20°	1954	1954	1975
25°	1893	1935	1956
30°	1867	1900	1951
35°	1824	1871	1913
40°	1753	1837	1845
45°	1700	1760	1763
50°	1644	1718	1685
55°	1566	1597	1585
60°	1464	1479	1453
65°	1306	1339	1296
70°	1120	1124	1093
75°	887	886	852
80°	595	578	555
85°	324	321	299

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1805 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.6	3.7
10°-20°	200.0	10.6
20°-30°	299.7	15.8
30°-40°	355.2	18.8
40°-50°	355.8	18.8
50°-60°	302.0	16.0
60°-70°	203.6	10.8
70°-80°	89.5	4.7
80°-90°	14.6	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°	570.3	30.2
0°-40°	925.5	48.9
0°-60°	1583.3	83.7
0°-90°	1891.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1891.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	750	750	750	750	750	
5°	745	743	745	743	761	70
15°	713	705	709	713	713	199
25°	638	641	652	660	659	295
35°	555	557	570	583	582	345
45°	447	455	462	474	463	345
55°	334	332	340	338	338	297
65°	205	202	210	202	204	204
75°	85	84	85	79	82	91
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°	750.3	750.3	750.3	750.3	750.3
2.5°	756.8	751.1	745.7	751.9	755.7
5°	745.0	743.2	745.3	743.0	761.0
7.5°	729.7	736.4	740.2	737.8	738.9
10°	721.5	719.2	727.8	733.8	733.0
12.5°	712.8	716.3	716.8	723.3	723.9
15°	713.3	705.1	709.4	713.1	713.4
17.5°	685.6	694.5	697.5	705.9	695.5
20°	682.2	675.7	682.2	690.8	689.5
22.5°	661.4	654.1	668.1	675.7	675.2
25°	637.7	641.2	651.7	660.2	658.9
27.5°	617.0	621.1	636.0	647.7	640.2
30°	601.0	599.0	611.6	622.0	627.9
32.5°	572.4	579.8	594.5	604.9	599.4
35°	555.1	556.7	569.6	582.8	582.4
37.5°	524.8	532.4	550.5	554.2	550.8
40°	498.9	506.6	522.9	526.9	525.3
42.5°	479.8	481.2	495.2	499.8	492.5
45°	446.6	454.9	462.5	474.4	463.2
47.5°	418.3	422.2	438.5	441.7	435.7
50°	392.6	394.0	410.4	406.4	402.5
52.5°	360.4	366.1	375.3	374.5	370.0
55°	333.8	331.6	340.3	338.0	337.9
57.5°	302.0	305.8	313.0	309.3	303.4
60°	272.1	272.2	274.8	270.7	269.9
62.5°	238.9	240.1	240.6	235.5	243.8
65°	205.1	202.4	210.3	202.3	203.6
67.5°	174.0	175.3	174.6	169.5	171.5
70°	142.4	144.2	142.9	137.2	138.9
72.5°	113.5	111.4	112.8	105.6	108.9
75°	85.3	83.6	85.2	79.1	81.9
77.5°	58.1	59.5	58.5	55.3	57.2
80°	38.4	37.3	37.3	35.5	35.8
82.5°	22.4	21.3	21.0	20.4	21.3
85°	10.5	10.2	10.4	10.1	9.7
87.5°	3.8	3.9	3.9	3.7	3.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)