

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: P590059

Luminaire Tested: FSR-24-2-LD4-1STD-35-UNV-82-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590059
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-82-96-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1799.0 lumens
Efficiency: N/A
Efficacy: 108.4 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

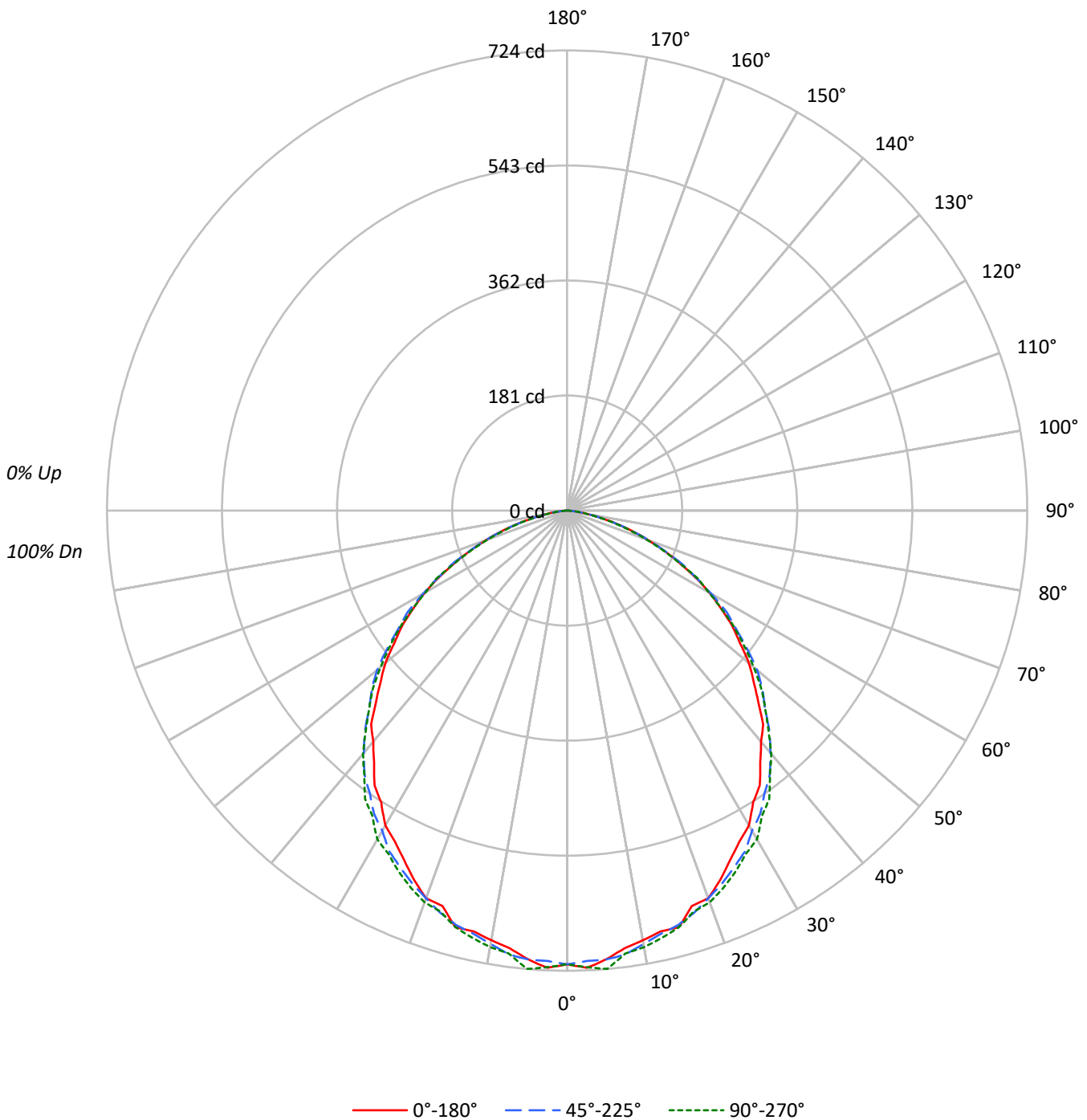
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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																												
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°	1921	1921	1921
5°	1914	1915	1955
10°	1876	1892	1905
15°	1891	1880	1891
20°	1859	1859	1878
25°	1801	1841	1861
30°	1777	1808	1856
35°	1735	1780	1820
40°	1667	1748	1755
45°	1617	1674	1677
50°	1564	1634	1603
55°	1490	1519	1508
60°	1393	1407	1382
65°	1242	1274	1233
70°	1066	1069	1040
75°	844	842	810
80°	566	550	528
85°	309	306	284

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1717 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.1	3.7
10°-20°	190.3	10.6
20°-30°	285.1	15.8
30°-40°	337.9	18.8
40°-50°	338.5	18.8
50°-60°	287.4	16.0
60°-70°	193.7	10.8
70°-80°	85.1	4.7
80°-90°	13.8	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°	542.5	30.2
0°-40°	880.4	48.9
0°-60°	1506.3	83.7
0°-90°	1799.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1799.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	714	714	714	714	714	
5°	709	707	709	707	724	67
15°	679	671	675	678	679	189
25°	607	610	620	628	627	280
35°	528	530	542	554	554	328
45°	425	433	440	451	441	329
55°	318	316	324	322	322	283
65°	195	192	200	192	194	194
75°	81	80	81	75	78	87
85°	10	10	10	10	9	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	713.8	713.8	713.8	713.8	713.8
2.5°	720.0	714.5	709.5	715.4	719.0
5°	708.7	707.1	709.0	706.9	723.9
7.5°	694.2	700.5	704.2	701.9	702.9
10°	686.4	684.2	692.4	698.1	697.3
12.5°	678.1	681.4	681.9	688.1	688.6
15°	678.6	670.8	674.9	678.4	678.7
17.5°	652.2	660.7	663.6	671.6	661.6
20°	649.0	642.8	649.0	657.2	655.9
22.5°	629.2	622.3	635.6	642.8	642.4
25°	606.7	610.0	620.0	628.1	626.8
27.5°	587.0	590.9	605.0	616.2	609.0
30°	571.8	569.8	581.8	591.8	597.3
32.5°	544.6	551.6	565.6	575.5	570.2
35°	528.1	529.7	541.9	554.4	554.1
37.5°	499.2	506.5	523.8	527.3	524.0
40°	474.6	481.9	497.5	501.3	499.7
42.5°	456.5	457.8	471.1	475.5	468.6
45°	424.9	432.8	440.0	451.3	440.6
47.5°	398.0	401.6	417.1	420.2	414.5
50°	373.5	374.8	390.4	386.6	382.9
52.5°	342.8	348.3	357.0	356.3	352.0
55°	317.6	315.5	323.8	321.6	321.5
57.5°	287.3	291.0	297.8	294.3	288.7
60°	258.9	259.0	261.5	257.5	256.8
62.5°	227.3	228.4	228.9	224.0	232.0
65°	195.1	192.5	200.1	192.4	193.7
67.5°	165.5	166.8	166.1	161.3	163.1
70°	135.5	137.1	135.9	130.5	132.2
72.5°	108.0	106.0	107.3	100.5	103.6
75°	81.2	79.5	81.0	75.3	77.9
77.5°	55.3	56.6	55.7	52.6	54.4
80°	36.5	35.5	35.5	33.7	34.1
82.5°	21.3	20.3	20.0	19.4	20.3
85°	10.0	9.7	9.9	9.6	9.2
87.5°	3.6	3.7	3.7	3.5	3.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)