

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: P590063

Luminaire Tested: FSR-24-2-LD4-1STD-35-UNV-93-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590063
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-93-86-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1895.0 lumens
Efficiency: N/A
Efficacy: 114.2 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

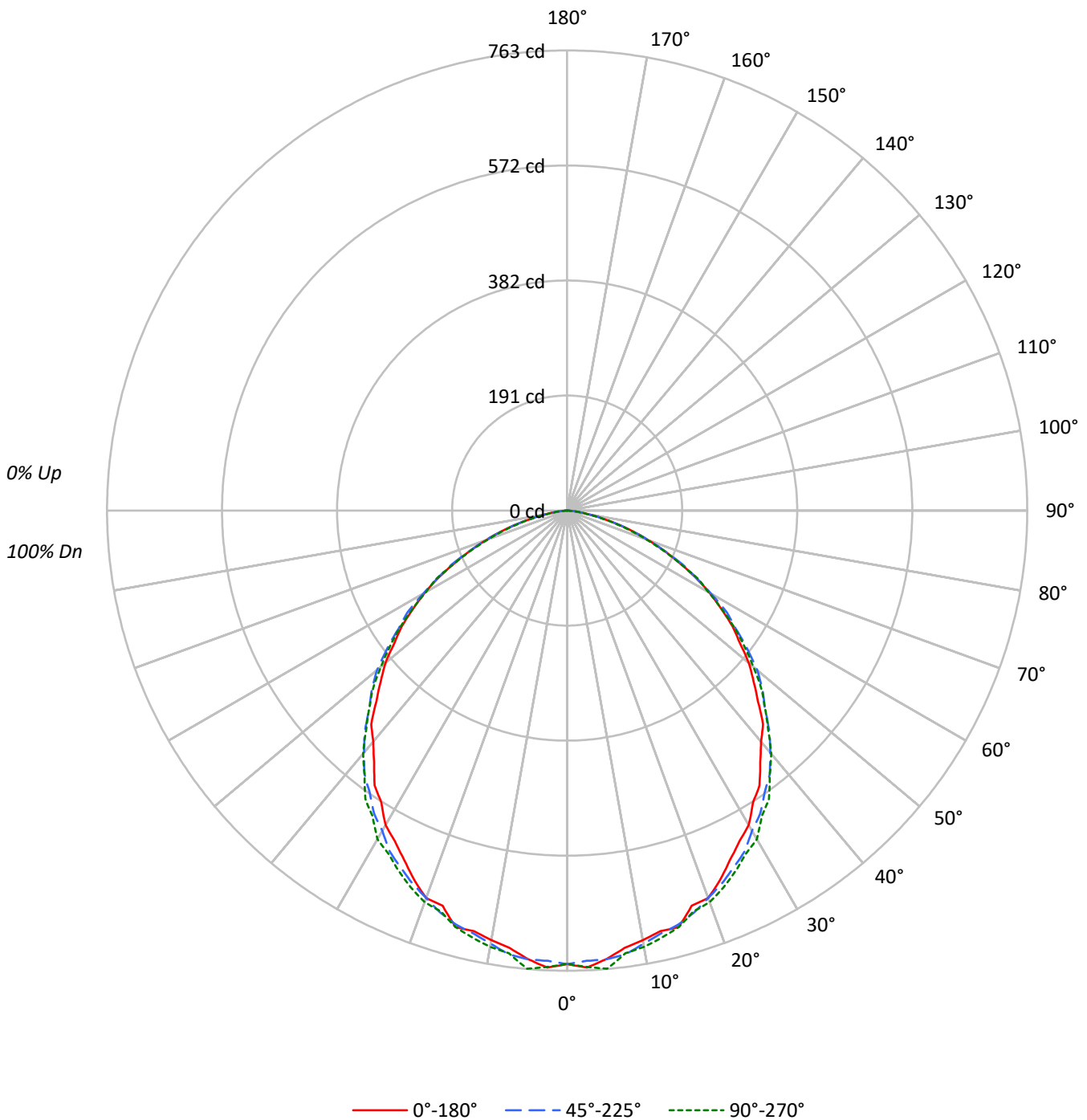
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2023	2023	2023
5°	2016	2017	2060
10°	1976	1993	2007
15°	1991	1981	1992
20°	1958	1958	1979
25°	1898	1939	1960
30°	1872	1904	1955
35°	1827	1875	1917
40°	1756	1841	1849
45°	1703	1764	1766
50°	1647	1721	1689
55°	1569	1600	1589
60°	1468	1482	1456
65°	1309	1342	1300
70°	1123	1127	1095
75°	889	887	853
80°	595	580	556
85°	324	321	299

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1809 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.7	3.7
10°-20°	200.4	10.6
20°-30°	300.3	15.8
30°-40°	355.9	18.8
40°-50°	356.6	18.8
50°-60°	302.7	16.0
60°-70°	204.1	10.8
70°-80°	89.7	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°	571.5	30.2
0°-40°	927.4	48.9
0°-60°	1586.7	83.7
0°-90°	1895.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1895.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	752	752	752	752	752	
5°	746	745	747	745	763	70
15°	715	707	711	715	715	199
25°	639	643	653	662	660	295
35°	556	558	571	584	584	345
45°	448	456	464	475	464	346
55°	334	332	341	339	339	298
65°	206	203	211	203	204	204
75°	86	84	85	79	82	92
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°	751.9	751.9	751.9	751.9	751.9
2.5°	758.4	752.7	747.3	753.5	757.3
5°	746.5	744.8	746.8	744.6	762.6
7.5°	731.2	737.9	741.8	739.4	740.4
10°	723.1	720.7	729.4	735.4	734.5
12.5°	714.3	717.8	718.3	724.8	725.4
15°	714.8	706.6	710.9	714.6	714.9
17.5°	687.0	696.0	699.0	707.4	696.9
20°	683.6	677.1	683.6	692.3	690.9
22.5°	662.8	655.5	669.5	677.1	676.7
25°	639.1	642.6	653.1	661.6	660.2
27.5°	618.3	622.4	637.3	649.1	641.5
30°	602.3	600.2	612.9	623.4	629.2
32.5°	573.6	581.0	595.8	606.2	600.6
35°	556.3	557.9	570.8	584.0	583.6
37.5°	525.9	533.6	551.7	555.4	552.0
40°	500.0	507.6	524.0	528.0	526.4
42.5°	480.8	482.2	496.3	500.8	493.6
45°	447.5	455.9	463.5	475.4	464.1
47.5°	419.2	423.1	439.4	442.6	436.7
50°	393.5	394.8	411.2	407.3	403.4
52.5°	361.1	366.9	376.1	375.3	370.8
55°	334.5	332.3	341.0	338.7	338.6
57.5°	302.6	306.5	313.7	310.0	304.1
60°	272.7	272.8	275.4	271.2	270.5
62.5°	239.4	240.6	241.1	236.0	244.4
65°	205.5	202.8	210.8	202.7	204.1
67.5°	174.4	175.7	174.9	169.9	171.8
70°	142.7	144.5	143.2	137.5	139.2
72.5°	113.8	111.6	113.0	105.8	109.1
75°	85.5	83.8	85.3	79.3	82.0
77.5°	58.2	59.6	58.6	55.4	57.3
80°	38.4	37.4	37.4	35.5	35.9
82.5°	22.4	21.4	21.1	20.5	21.4
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)