

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: P562923

Luminaire Tested: FSR-24-4-LD4-2STD-35-UNV-93-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562923
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-4-LD4-2STD-35-UNV-93-94-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 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: 7838.0 lumens
Efficiency: N/A
Efficacy: 117.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

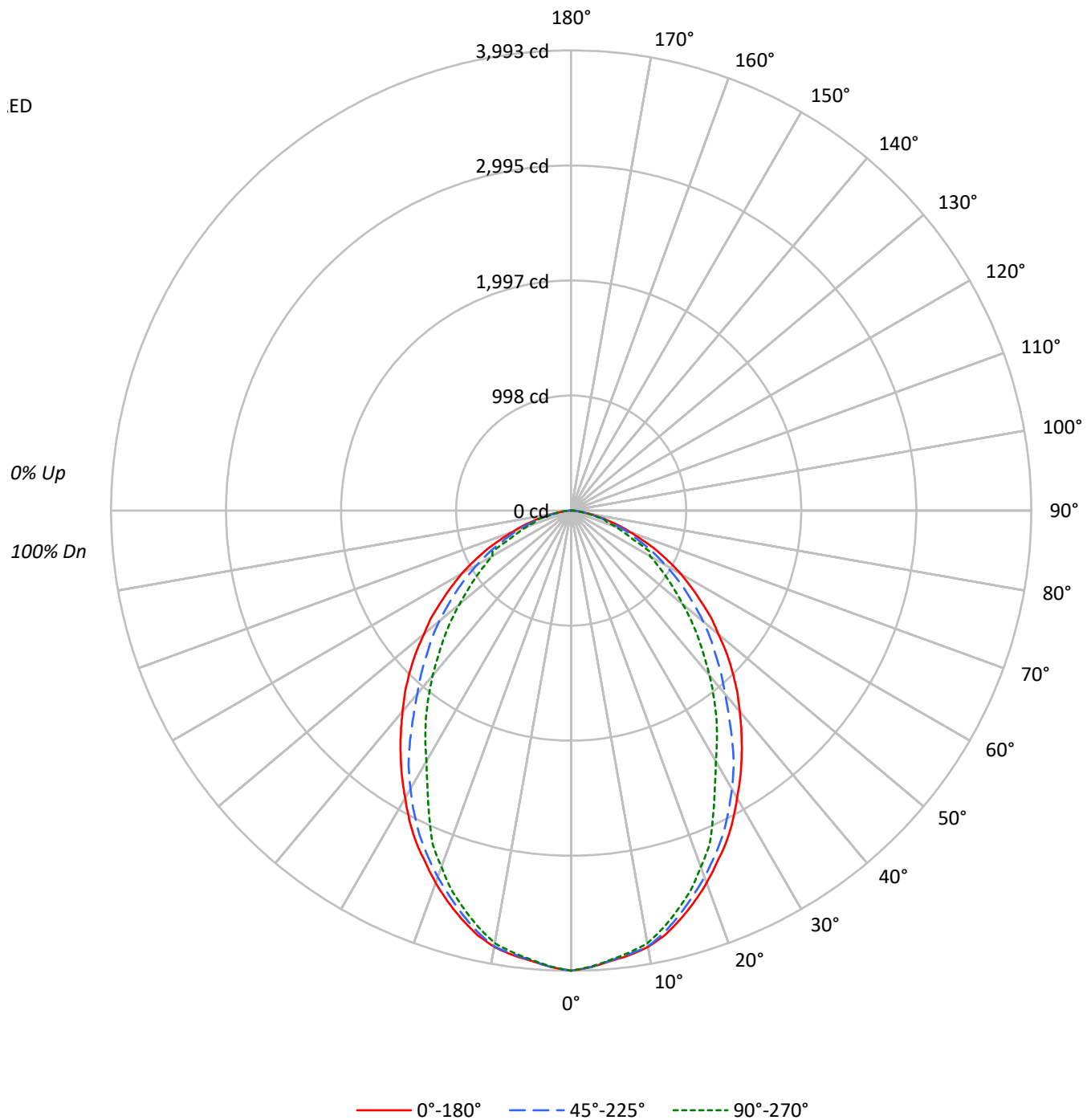
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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					100			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87					87			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75					75			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65					65			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56					56			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50					50			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44					44			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40					40			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36					36			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33					33			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30					30			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5372	5372	5372
5°	5299	5293	5286
10°	5253	5247	5209
15°	5111	5060	4989
20°	4924	4844	4712
25°	4721	4619	4331
30°	4475	4331	3901
35°	4238	4003	3609
40°	3997	3648	3283
45°	3768	3373	2969
50°	3488	3130	2647
55°	3227	2837	2371
60°	2956	2534	2124
65°	2601	2219	1881
70°	2143	1943	1598
75°	1704	1488	1560
80°	1144	1073	1001
85°	713	855	997

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3768 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	371.7	4.7
10°-20°	1020.0	13.0
20°-30°	1412.1	18.0
30°-40°	1505.7	19.2
40°-50°	1373.6	17.5
50°-60°	1076.1	13.7
60°-70°	701.4	8.9
70°-80°	310.7	4.0
80°-90°	66.7	0.9
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°	2803.7	35.8
0°-40°	4309.4	55.0
0°-60°	6759.2	86.2
0°-90°	7838.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7838.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3993	3993	3993	3993	3993	
5°	3923	3919	3919	3914	3914	372
15°	3670	3670	3632	3596	3582	1032
25°	3180	3162	3111	3000	2917	1460
35°	2580	2562	2437	2252	2197	1613
45°	1980	1939	1772	1625	1560	1525
55°	1376	1334	1209	1066	1011	1234
65°	817	771	697	711	591	805
75°	328	305	286	272	300	351
85°	46	51	55	60	65	64
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3992.6	3992.6	3992.6	3992.6	3992.6
2.5°	3964.9	3964.9	3964.9	3960.3	3960.3
5°	3923.3	3918.7	3918.7	3914.1	3914.1
7.5°	3891.0	3886.4	3881.8	3877.2	3867.9
10°	3844.9	3844.9	3840.3	3817.2	3812.6
12.5°	3771.0	3766.4	3747.9	3715.6	3706.4
15°	3669.5	3669.5	3632.5	3595.6	3581.8
17.5°	3558.7	3554.1	3507.9	3471.0	3452.5
20°	3438.7	3429.5	3383.3	3323.3	3291.0
22.5°	3304.8	3304.8	3249.4	3171.0	3138.7
25°	3180.2	3161.7	3111.0	3000.2	2917.1
27.5°	3037.1	3009.4	2954.0	2797.1	2700.2
30°	2880.2	2866.3	2787.9	2584.8	2510.9
32.5°	2732.5	2709.4	2626.3	2414.0	2354.0
35°	2580.2	2561.7	2437.1	2252.5	2197.1
37.5°	2427.9	2404.8	2247.8	2100.1	2030.9
40°	2275.5	2247.8	2077.1	1943.2	1869.4
42.5°	2132.4	2095.5	1929.4	1786.3	1703.2
45°	1980.1	1938.6	1772.4	1624.7	1560.1
47.5°	1827.8	1790.9	1638.6	1486.3	1412.4
50°	1666.3	1634.0	1495.5	1343.2	1264.7
52.5°	1532.4	1481.6	1347.8	1195.5	1130.8
55°	1375.5	1333.9	1209.3	1066.2	1010.8
57.5°	1232.4	1190.8	1075.5	941.6	895.4
60°	1098.5	1038.5	941.6	826.2	789.3
62.5°	950.8	904.7	821.6	724.7	770.8
65°	817.0	770.8	697.0	710.8	590.8
67.5°	669.3	646.2	581.6	517.0	498.5
70°	544.7	517.0	493.9	424.6	406.2
72.5°	433.9	406.2	373.9	336.9	323.1
75°	327.7	304.6	286.2	272.3	300.0
77.5°	226.2	216.9	203.1	189.2	184.6
80°	147.7	143.1	138.5	133.9	129.2
82.5°	87.7	87.7	87.7	87.7	87.7
85°	46.2	50.8	55.4	60.0	64.6
87.5°	27.7	27.7	32.3	36.9	41.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)