

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: P561871

Luminaire Tested: FSR-12-4-LD4-2STD-50-UNV-81-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561871
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-12-4-LD4-2STD-50-UNV-81-97-EDD
Description: 1X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6195.0 lumens
Efficiency: N/A
Efficacy: 93.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

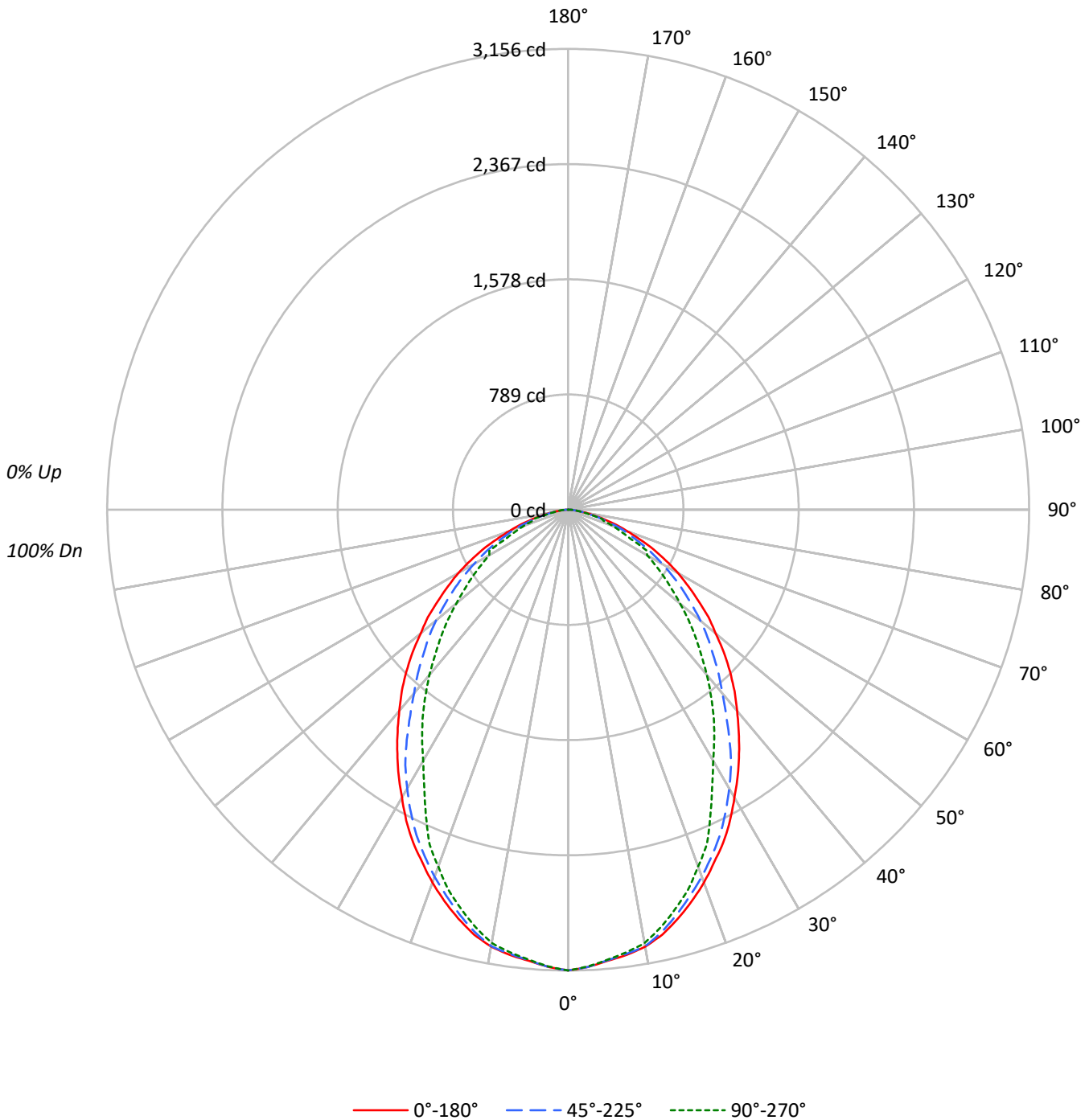
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	8492	8492	8492
5°	8376	8367	8357
10°	8304	8294	8234
15°	8080	7999	7887
20°	7783	7658	7449
25°	7463	7301	6846
30°	7073	6847	6167
35°	6699	6328	5705
40°	6318	5767	5190
45°	5956	5331	4693
50°	5514	4948	4185
55°	5100	4484	3748
60°	4673	4005	3357
65°	4111	3508	2974
70°	3387	3072	2526
75°	2693	2352	2465
80°	1808	1695	1582
85°	1127	1352	1578

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5956 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	293.7	4.7
10°-20°	806.2	13.0
20°-30°	1116.1	18.0
30°-40°	1190.1	19.2
40°-50°	1085.7	17.5
50°-60°	850.5	13.7
60°-70°	554.3	8.9
70°-80°	245.6	4.0
80°-90°	52.7	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°	2216.0	35.8
0°-40°	3406.1	55.0
0°-60°	5342.3	86.2
0°-90°	6195.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6195.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3156	3156	3156	3156	3156	
5°	3101	3097	3097	3094	3094	294
15°	2900	2900	2871	2842	2831	815
25°	2514	2499	2459	2371	2306	1154
35°	2039	2025	1926	1780	1736	1275
45°	1565	1532	1401	1284	1233	1206
55°	1087	1054	956	843	799	975
65°	646	609	551	562	467	636
75°	259	241	226	215	237	278
85°	36	40	44	47	51	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3155.7	3155.7	3155.7	3155.7	3155.7
2.5°	3133.8	3133.8	3133.8	3130.1	3130.1
5°	3100.9	3097.3	3097.3	3093.6	3093.6
7.5°	3075.4	3071.7	3068.1	3064.4	3057.2
10°	3038.9	3038.9	3035.3	3017.0	3013.4
12.5°	2980.5	2976.9	2962.3	2936.8	2929.5
15°	2900.3	2900.3	2871.1	2841.9	2831.0
17.5°	2812.7	2809.1	2772.6	2743.4	2728.8
20°	2717.9	2710.6	2674.1	2626.7	2601.1
22.5°	2612.1	2612.1	2568.3	2506.3	2480.7
25°	2513.6	2499.0	2458.9	2371.3	2305.6
27.5°	2400.5	2378.6	2334.8	2210.8	2134.2
30°	2276.4	2265.5	2203.5	2043.0	1984.6
32.5°	2159.7	2141.5	2075.8	1908.0	1860.6
35°	2039.3	2024.7	1926.2	1780.3	1736.5
37.5°	1918.9	1900.7	1776.6	1659.9	1605.2
40°	1798.5	1776.6	1641.7	1535.9	1477.5
42.5°	1685.4	1656.3	1524.9	1411.8	1346.2
45°	1565.1	1532.2	1400.9	1284.1	1233.1
47.5°	1444.7	1415.5	1295.1	1174.7	1116.3
50°	1317.0	1291.4	1182.0	1061.6	999.6
52.5°	1211.2	1171.1	1065.3	944.9	893.8
55°	1087.1	1054.3	955.8	842.7	798.9
57.5°	974.1	941.2	850.0	744.2	707.7
60°	868.3	820.8	744.2	653.0	623.8
62.5°	751.5	715.0	649.4	572.8	609.2
65°	645.7	609.2	550.9	561.8	467.0
67.5°	529.0	510.7	459.7	408.6	394.0
70°	430.5	408.6	390.4	335.6	321.0
72.5°	342.9	321.0	295.5	266.3	255.4
75°	259.0	240.8	226.2	215.2	237.1
77.5°	178.8	171.5	160.5	149.6	145.9
80°	116.7	113.1	109.4	105.8	102.1
82.5°	69.3	69.3	69.3	69.3	69.3
85°	36.5	40.1	43.8	47.4	51.1
87.5°	21.9	21.9	25.5	29.2	32.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)