

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: P561757

Luminaire Tested: FSR-12-4-LD4-2STD-35-UNV-82-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561757
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-35-UNV-82-96-EDD
Description: 1X4 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: 6124.0 lumens
Efficiency: N/A
Efficacy: 92.0 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

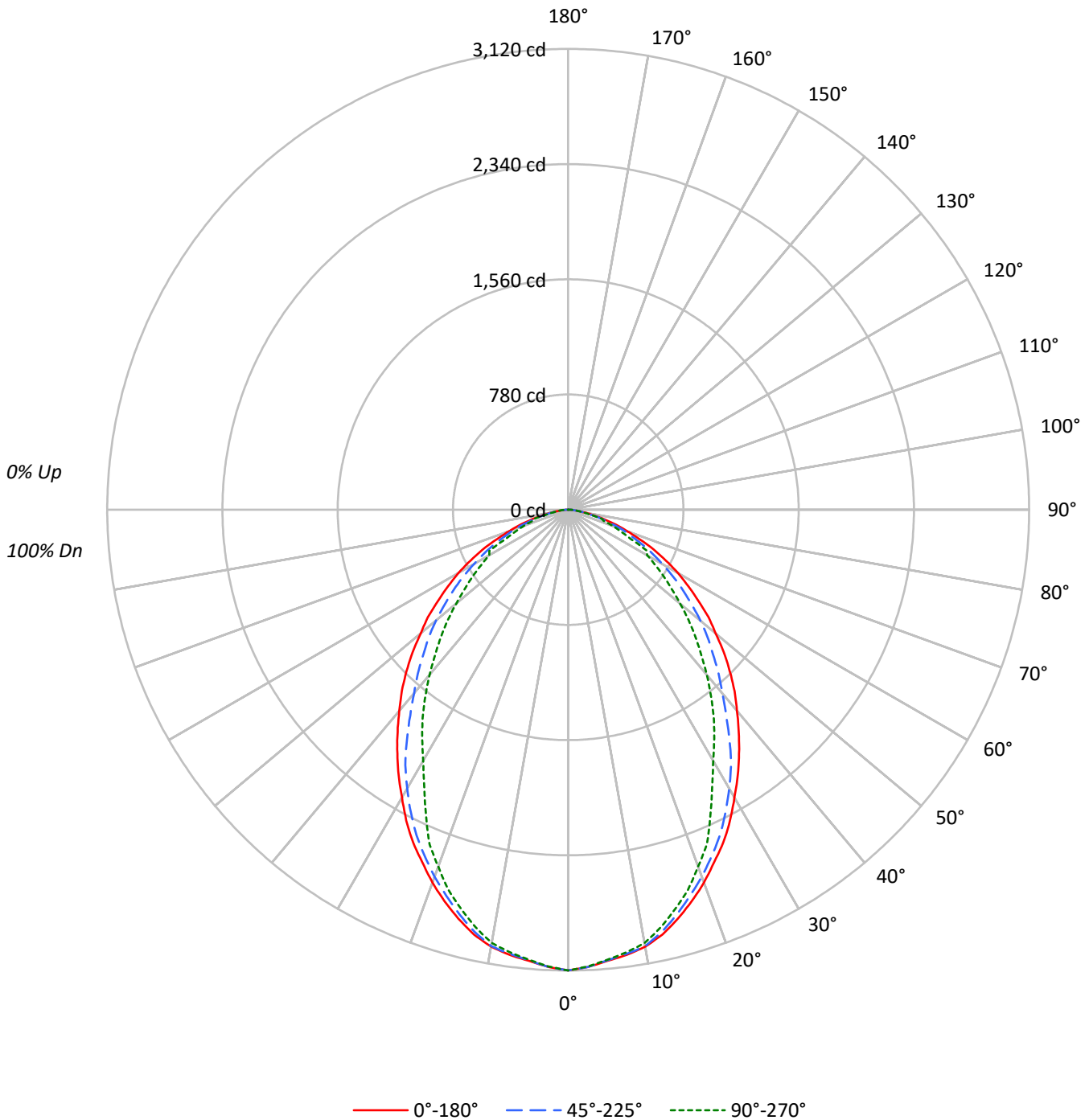
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8395	8395	8395
5°	8280	8271	8261
10°	8209	8199	8140
15°	7987	7907	7796
20°	7694	7570	7363
25°	7378	7217	6767
30°	6993	6768	6096
35°	6622	6255	5639
40°	6245	5701	5131
45°	5888	5270	4639
50°	5450	4892	4137
55°	5042	4433	3705
60°	4619	3960	3319
65°	4064	3468	2939
70°	3348	3036	2497
75°	2663	2325	2437
80°	1788	1677	1565
85°	1115	1337	1559

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5888 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	290.4	4.7
10°-20°	796.9	13.0
20°-30°	1103.3	18.0
30°-40°	1176.4	19.2
40°-50°	1073.2	17.5
50°-60°	840.8	13.7
60°-70°	548.0	8.9
70°-80°	242.8	4.0
80°-90°	52.1	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°	2190.6	35.8
0°-40°	3367.0	55.0
0°-60°	5281.1	86.2
0°-90°	6124.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6124.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3120	3120	3120	3120	3120	
5°	3065	3062	3062	3058	3058	291
15°	2867	2867	2838	2809	2798	806
25°	2485	2470	2431	2344	2279	1141
35°	2016	2002	1904	1760	1717	1260
45°	1547	1515	1385	1269	1219	1192
55°	1075	1042	945	833	790	964
65°	638	602	545	555	462	629
75°	256	238	224	213	234	274
85°	36	40	43	47	50	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3119.5	3119.5	3119.5	3119.5	3119.5
2.5°	3097.8	3097.8	3097.8	3094.2	3094.2
5°	3065.4	3061.8	3061.8	3058.2	3058.2
7.5°	3040.1	3036.5	3032.9	3029.3	3022.1
10°	3004.1	3004.1	3000.5	2982.4	2978.8
12.5°	2946.4	2942.8	2928.3	2903.1	2895.9
15°	2867.0	2867.0	2838.2	2809.3	2798.5
17.5°	2780.5	2776.9	2740.8	2712.0	2697.5
20°	2686.7	2679.5	2643.4	2596.6	2571.3
22.5°	2582.1	2582.1	2538.9	2477.6	2452.3
25°	2484.8	2470.3	2430.7	2344.1	2279.2
27.5°	2373.0	2351.3	2308.1	2185.4	2109.7
30°	2250.4	2239.5	2178.2	2019.6	1961.8
32.5°	2135.0	2116.9	2052.0	1886.1	1839.2
35°	2015.9	2001.5	1904.1	1759.9	1716.6
37.5°	1896.9	1878.9	1756.3	1640.9	1586.8
40°	1777.9	1756.3	1622.9	1518.3	1460.6
42.5°	1666.1	1637.3	1507.4	1395.7	1330.7
45°	1547.1	1514.7	1384.8	1269.4	1218.9
47.5°	1428.1	1399.3	1280.3	1161.2	1103.5
50°	1301.9	1276.6	1168.5	1049.4	988.1
52.5°	1197.3	1157.6	1053.1	934.0	883.6
55°	1074.7	1042.2	944.9	833.1	789.8
57.5°	962.9	930.4	840.3	735.7	699.6
60°	858.3	811.4	735.7	645.5	616.7
62.5°	742.9	706.8	641.9	566.2	602.3
65°	638.3	602.3	544.6	555.4	461.6
67.5°	522.9	504.9	454.4	403.9	389.5
70°	425.5	403.9	385.9	331.8	317.4
72.5°	339.0	317.4	292.1	263.3	252.4
75°	256.1	238.0	223.6	212.8	234.4
77.5°	176.7	169.5	158.7	147.9	144.3
80°	115.4	111.8	108.2	104.6	101.0
82.5°	68.5	68.5	68.5	68.5	68.5
85°	36.1	39.7	43.3	46.9	50.5
87.5°	21.6	21.6	25.2	28.9	32.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)