

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: P562892

Luminaire Tested: FSR-24-4-LD4-2STD-35-UNV-81-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562892
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-81-96-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6150.0 lumens
Efficiency: N/A
Efficacy: 92.3 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

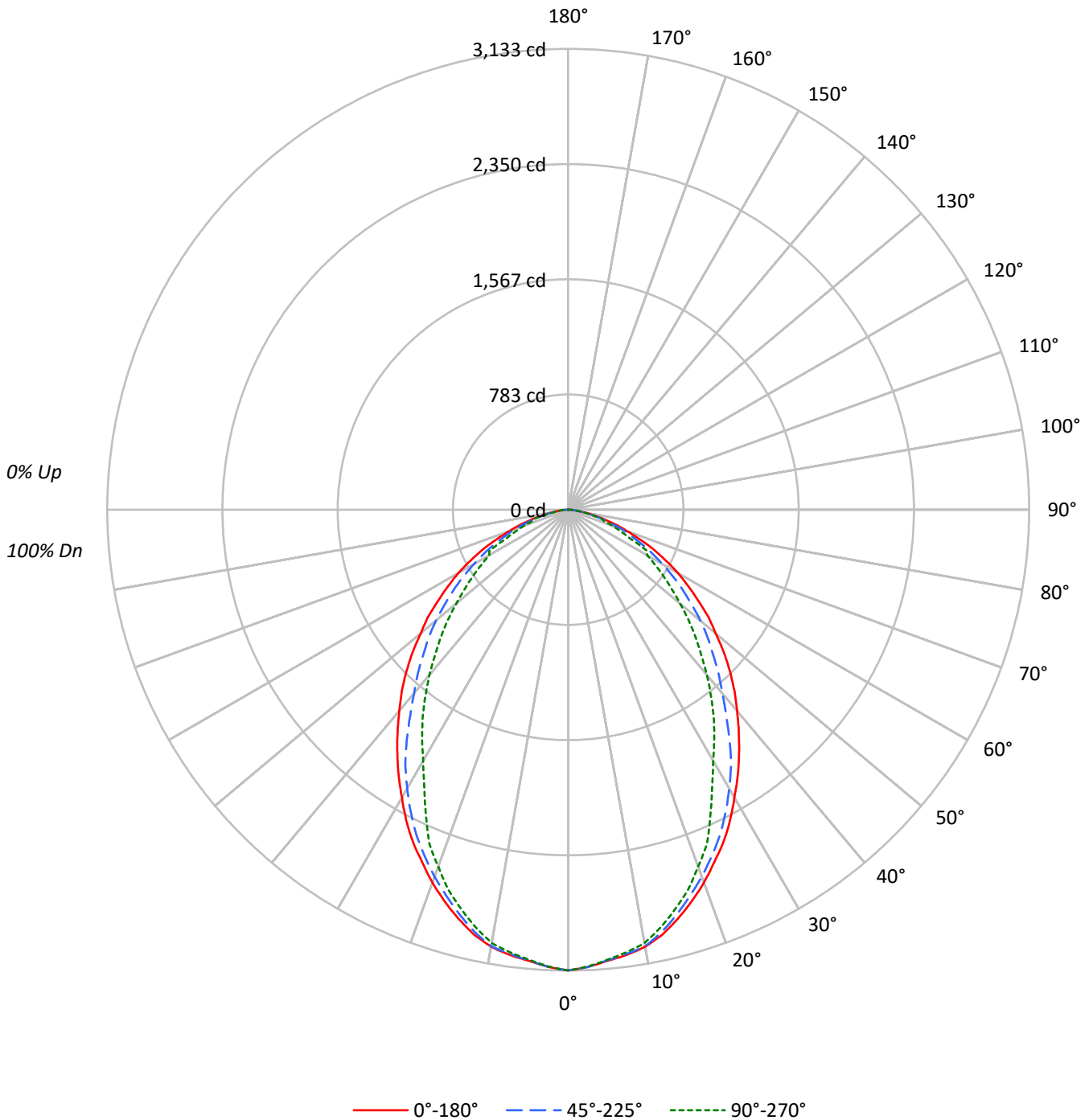
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4215	4215	4215
5°	4158	4153	4148
10°	4122	4117	4087
15°	4011	3970	3915
20°	3863	3801	3697
25°	3704	3624	3398
30°	3511	3399	3061
35°	3325	3141	2832
40°	3136	2862	2576
45°	2956	2646	2329
50°	2737	2456	2077
55°	2532	2226	1860
60°	2320	1988	1667
65°	2041	1741	1476
70°	1681	1524	1254
75°	1337	1167	1224
80°	898	841	786
85°	559	672	783

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2956 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	291.6	4.7
10°-20°	800.3	13.0
20°-30°	1108.0	18.0
30°-40°	1181.4	19.2
40°-50°	1077.8	17.5
50°-60°	844.4	13.7
60°-70°	550.3	8.9
70°-80°	243.8	4.0
80°-90°	52.3	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°	2199.9	35.8
0°-40°	3381.3	55.0
0°-60°	5303.5	86.2
0°-90°	6150.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6150.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3133	3133	3133	3133	3133	
5°	3078	3075	3075	3071	3071	292
15°	2879	2879	2850	2821	2810	809
25°	2495	2481	2441	2354	2289	1146
35°	2024	2010	1912	1767	1724	1266
45°	1554	1521	1391	1275	1224	1197
55°	1079	1047	949	837	793	968
65°	641	605	547	558	464	632
75°	257	239	224	214	235	276
85°	36	40	44	47	51	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3132.7	3132.7	3132.7	3132.7	3132.7
2.5°	3111.0	3111.0	3111.0	3107.4	3107.4
5°	3078.4	3074.8	3074.8	3071.2	3071.2
7.5°	3053.1	3049.4	3045.8	3042.2	3034.9
10°	3016.8	3016.8	3013.2	2995.1	2991.5
12.5°	2958.9	2955.3	2940.8	2915.4	2908.2
15°	2879.2	2879.2	2850.2	2821.3	2810.4
17.5°	2792.3	2788.7	2752.5	2723.5	2709.0
20°	2698.1	2690.9	2654.7	2607.6	2582.2
22.5°	2593.1	2593.1	2549.6	2488.1	2462.7
25°	2495.3	2480.8	2441.0	2354.1	2288.9
27.5°	2383.0	2361.3	2317.9	2194.7	2118.7
30°	2259.9	2249.0	2187.5	2028.1	1970.2
32.5°	2144.0	2125.9	2060.7	1894.1	1847.0
35°	2024.5	2010.0	1912.2	1767.4	1723.9
37.5°	1905.0	1886.9	1763.7	1647.9	1593.5
40°	1785.5	1763.7	1629.7	1524.7	1466.8
42.5°	1673.2	1644.2	1513.8	1401.6	1336.4
45°	1553.7	1521.1	1390.7	1274.8	1224.1
47.5°	1434.2	1405.2	1285.7	1166.2	1108.2
50°	1307.4	1282.1	1173.4	1053.9	992.3
52.5°	1202.4	1162.5	1057.5	938.0	887.3
55°	1079.3	1046.7	948.9	836.6	793.1
57.5°	967.0	934.4	843.8	738.8	702.6
60°	862.0	814.9	738.8	648.3	619.3
62.5°	746.1	709.8	644.7	568.6	604.8
65°	641.0	604.8	546.9	557.7	463.6
67.5°	525.1	507.0	456.3	405.6	391.1
70°	427.4	405.6	387.5	333.2	318.7
72.5°	340.4	318.7	293.4	264.4	253.5
75°	257.1	239.0	224.5	213.7	235.4
77.5°	177.5	170.2	159.4	148.5	144.9
80°	115.9	112.3	108.6	105.0	101.4
82.5°	68.8	68.8	68.8	68.8	68.8
85°	36.2	39.8	43.5	47.1	50.7
87.5°	21.7	21.7	25.4	29.0	32.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)