

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: P561745

Luminaire Tested: FSR-12-4-LD4-2STD-35-UNV-82-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561745
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-82-84-EDD
Description: 1X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6178.0 lumens
Efficiency: N/A
Efficacy: 92.8 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

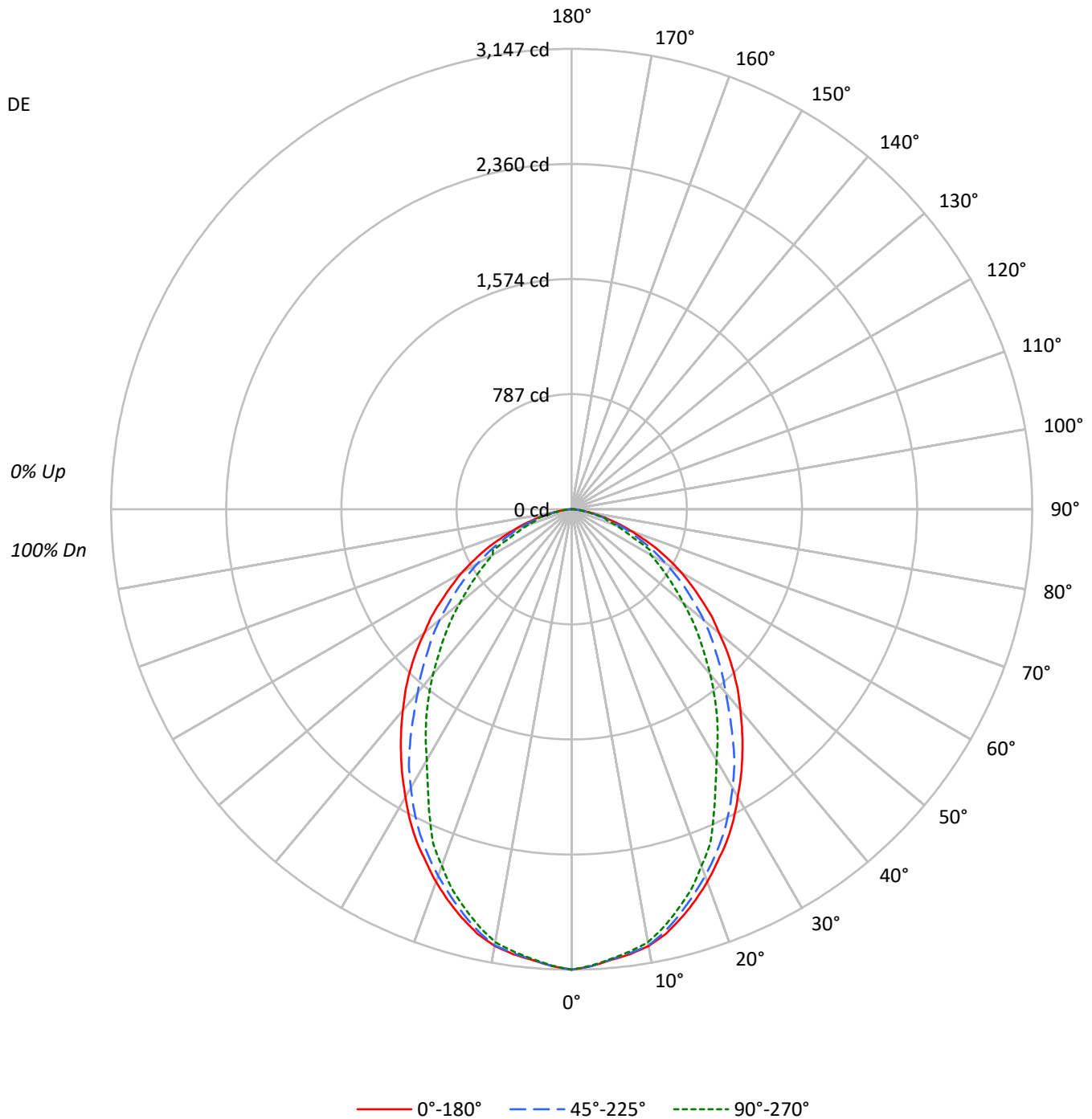
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	8469	8469	8469
5°	8353	8344	8334
10°	8281	8271	8211
15°	8058	7977	7865
20°	7762	7637	7428
25°	7443	7281	6827
30°	7054	6828	6150
35°	6681	6310	5689
40°	6301	5751	5176
45°	5940	5316	4680
50°	5498	4935	4173
55°	5087	4472	3738
60°	4660	3994	3348
65°	4101	3498	2965
70°	3378	3063	2519
75°	2686	2346	2459
80°	1804	1691	1579
85°	1124	1349	1572

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5940 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	292.9	4.7
10°-20°	804.0	13.0
20°-30°	1113.0	18.0
30°-40°	1186.8	19.2
40°-50°	1082.7	17.5
50°-60°	848.2	13.7
60°-70°	552.8	8.9
70°-80°	244.9	4.0
80°-90°	52.6	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°	2209.9	35.8
0°-40°	3396.7	55.0
0°-60°	5327.7	86.2
0°-90°	6178.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6178.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3147	3147	3147	3147	3147	
5°	3092	3089	3089	3085	3085	294
15°	2892	2892	2863	2834	2823	813
25°	2507	2492	2452	2365	2299	1151
35°	2034	2019	1921	1775	1732	1271
45°	1561	1528	1397	1281	1230	1202
55°	1084	1051	953	840	797	972
65°	644	608	549	560	466	635
75°	258	240	226	215	236	277
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°	3147.0	3147.0	3147.0	3147.0	3147.0
2.5°	3125.2	3125.2	3125.2	3121.5	3121.5
5°	3092.4	3088.8	3088.8	3085.1	3085.1
7.5°	3067.0	3063.3	3059.7	3056.0	3048.8
10°	3030.6	3030.6	3026.9	3008.7	3005.1
12.5°	2972.4	2968.7	2954.2	2928.7	2921.4
15°	2892.3	2892.3	2863.2	2834.1	2823.2
17.5°	2805.0	2801.4	2765.0	2735.9	2721.3
20°	2710.4	2703.1	2666.8	2619.5	2594.0
22.5°	2604.9	2604.9	2561.3	2499.4	2473.9
25°	2506.7	2492.1	2452.1	2364.8	2299.3
27.5°	2393.9	2372.1	2328.4	2204.7	2128.3
30°	2270.2	2259.3	2197.4	2037.4	1979.1
32.5°	2153.8	2135.6	2070.1	1902.7	1855.5
35°	2033.7	2019.2	1920.9	1775.4	1731.8
37.5°	1913.7	1895.5	1771.8	1655.4	1600.8
40°	1793.6	1771.8	1637.2	1531.7	1473.4
42.5°	1680.8	1651.7	1520.7	1408.0	1342.5
45°	1560.8	1528.0	1397.0	1280.6	1229.7
47.5°	1440.7	1411.6	1291.5	1171.5	1113.3
50°	1313.4	1287.9	1178.8	1058.7	996.9
52.5°	1207.9	1167.8	1062.3	942.3	891.3
55°	1084.2	1051.4	953.2	840.4	796.8
57.5°	971.4	938.6	847.7	742.2	705.8
60°	865.9	818.6	742.2	651.2	622.1
62.5°	749.5	713.1	647.6	571.2	607.6
65°	644.0	607.6	549.4	560.3	465.7
67.5°	527.5	509.3	458.4	407.5	392.9
70°	429.3	407.5	389.3	334.7	320.2
72.5°	342.0	320.2	294.7	265.6	254.7
75°	258.3	240.1	225.6	214.7	236.5
77.5°	178.3	171.0	160.1	149.2	145.5
80°	116.4	112.8	109.1	105.5	101.9
82.5°	69.1	69.1	69.1	69.1	69.1
85°	36.4	40.0	43.7	47.3	50.9
87.5°	21.8	21.8	25.5	29.1	32.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)