

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: P561719

Luminaire Tested: FSR-12-4-LD4-2STD-35-UNV-80-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561719
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-80-87-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6229.0 lumens
Efficiency: N/A
Efficacy: 93.5 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

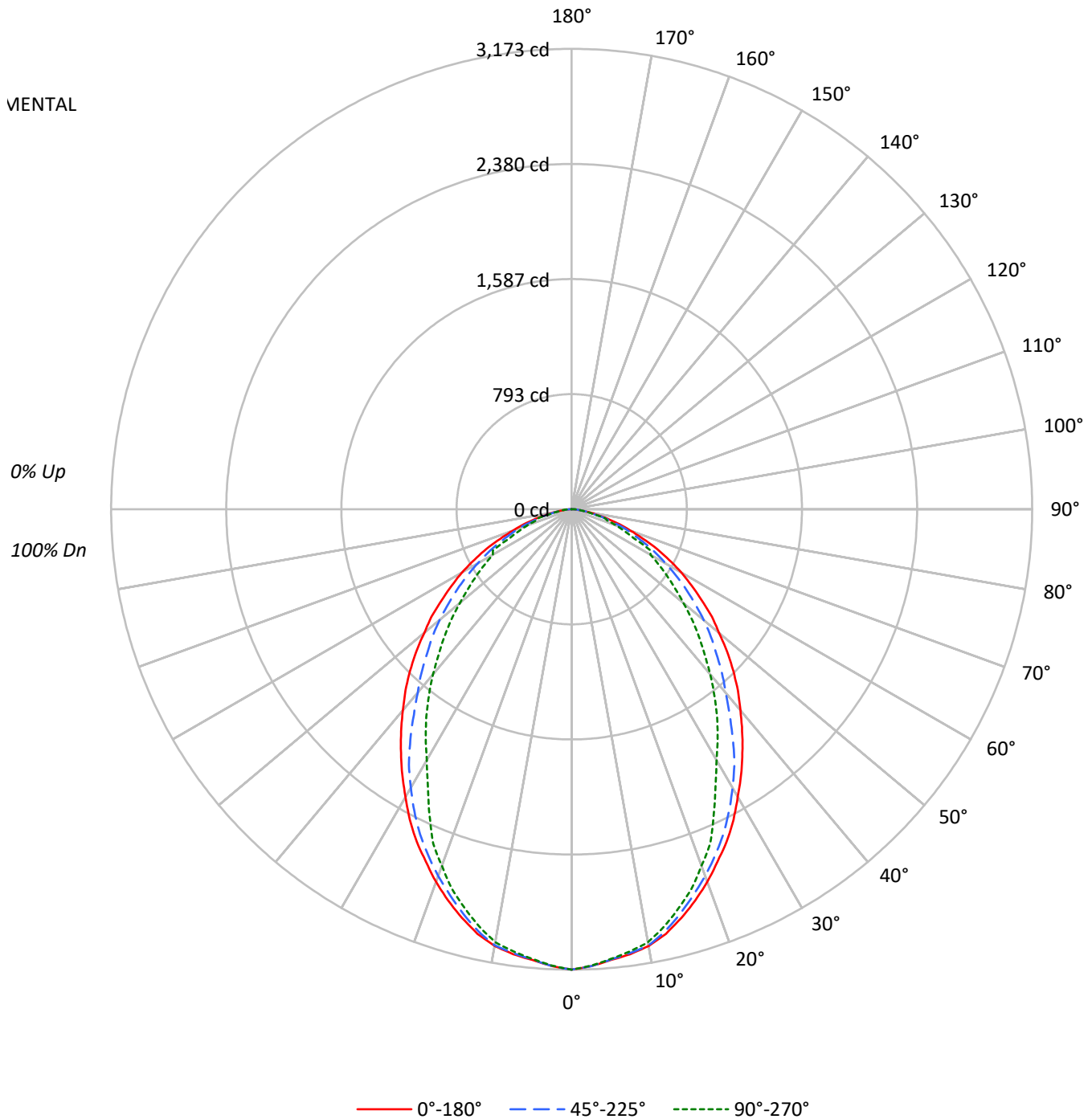
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	8538	8538	8538
5°	8422	8413	8403
10°	8349	8339	8279
15°	8124	8043	7930
20°	7826	7700	7490
25°	7504	7341	6883
30°	7112	6884	6201
35°	6736	6363	5736
40°	6353	5799	5219
45°	5989	5361	4718
50°	5544	4976	4208
55°	5128	4509	3769
60°	4698	4027	3376
65°	4134	3527	2989
70°	3405	3088	2540
75°	2707	2364	2479
80°	1819	1705	1592
85°	1133	1359	1587

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5989 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	295.4	4.7
10°-20°	810.6	13.0
20°-30°	1122.2	18.0
30°-40°	1196.6	19.2
40°-50°	1091.7	17.5
50°-60°	855.2	13.7
60°-70°	557.4	8.9
70°-80°	246.9	4.0
80°-90°	53.0	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°	2228.2	35.8
0°-40°	3424.8	55.0
0°-60°	5371.6	86.2
0°-90°	6229.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6229.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3173	3173	3173	3173	3173	
5°	3118	3114	3114	3111	3111	296
15°	2916	2916	2887	2858	2846	820
25°	2527	2513	2472	2384	2318	1160
35°	2050	2036	1937	1790	1746	1282
45°	1574	1541	1409	1291	1240	1212
55°	1093	1060	961	847	803	980
65°	649	613	554	565	470	640
75°	260	242	227	216	238	279
85°	37	40	44	48	51	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3173.0	3173.0	3173.0	3173.0	3173.0
2.5°	3151.0	3151.0	3151.0	3147.3	3147.3
5°	3117.9	3114.3	3114.3	3110.6	3110.6
7.5°	3092.3	3088.6	3084.9	3081.3	3073.9
10°	3055.6	3055.6	3051.9	3033.6	3029.9
12.5°	2996.9	2993.2	2978.6	2952.9	2945.5
15°	2916.2	2916.2	2886.9	2857.5	2846.5
17.5°	2828.2	2824.5	2787.8	2758.5	2743.8
20°	2732.8	2725.5	2688.8	2641.1	2615.4
22.5°	2626.4	2626.4	2582.4	2520.0	2494.4
25°	2527.4	2512.7	2472.3	2384.3	2318.3
27.5°	2413.7	2391.6	2347.6	2222.9	2145.9
30°	2288.9	2277.9	2215.6	2054.2	1995.5
32.5°	2171.6	2153.2	2087.2	1918.5	1870.8
35°	2050.5	2035.8	1936.8	1790.1	1746.1
37.5°	1929.5	1911.1	1786.4	1669.0	1614.0
40°	1808.4	1786.4	1650.7	1544.3	1485.6
42.5°	1694.7	1665.4	1533.3	1419.6	1353.6
45°	1573.6	1540.6	1408.6	1291.2	1239.8
47.5°	1452.6	1423.3	1302.2	1181.2	1122.5
50°	1324.2	1298.5	1188.5	1067.4	1005.1
52.5°	1217.8	1177.5	1071.1	950.1	898.7
55°	1093.1	1060.1	961.1	847.3	803.3
57.5°	979.4	946.4	854.7	748.3	711.6
60°	873.0	825.3	748.3	656.6	627.3
62.5°	755.6	719.0	652.9	575.9	612.6
65°	649.3	612.6	553.9	564.9	469.5
67.5°	531.9	513.5	462.2	410.8	396.2
70°	432.8	410.8	392.5	337.5	322.8
72.5°	344.8	322.8	297.1	267.8	256.8
75°	260.4	242.1	227.4	216.4	238.4
77.5°	179.7	172.4	161.4	150.4	146.7
80°	117.4	113.7	110.0	106.4	102.7
82.5°	69.7	69.7	69.7	69.7	69.7
85°	36.7	40.3	44.0	47.7	51.4
87.5°	22.0	22.0	25.7	29.3	33.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)