

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: P561334

Luminaire Tested: FSR-12-4-LD4-2HI-35-UNV-80-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561334
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-LD4-2HI-35-UNV-80-87-EDD-90
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6393.0 lumens
Efficiency: N/A
Efficacy: 74.0 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

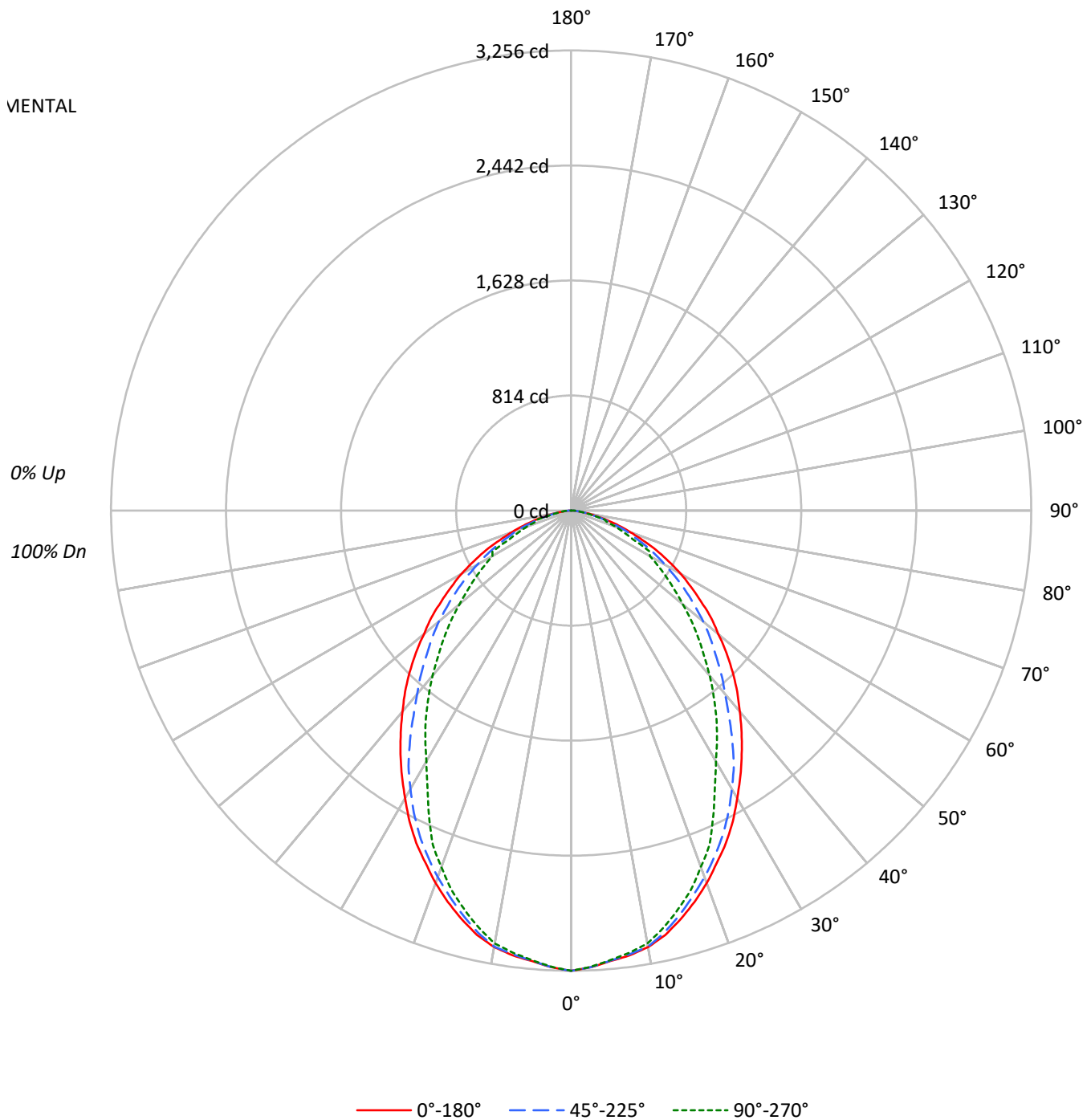
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	8763	8763	8763
5°	8644	8634	8624
10°	8569	8559	8497
15°	8338	8254	8139
20°	8032	7903	7687
25°	7702	7534	7065
30°	7300	7066	6364
35°	6913	6530	5887
40°	6520	5951	5356
45°	6146	5502	4843
50°	5690	5107	4318
55°	5263	4628	3868
60°	4822	4133	3465
65°	4243	3620	3068
70°	3495	3169	2607
75°	2779	2427	2544
80°	1867	1750	1633
85°	1161	1396	1627

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6146 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	303.1	4.7
10°-20°	831.9	13.0
20°-30°	1151.8	18.0
30°-40°	1228.1	19.2
40°-50°	1120.4	17.5
50°-60°	877.7	13.7
60°-70°	572.1	8.9
70°-80°	253.4	4.0
80°-90°	54.4	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°	2286.8	35.8
0°-40°	3514.9	55.0
0°-60°	5513.1	86.2
0°-90°	6393.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6393.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3256	3256	3256	3256	3256	
5°	3200	3196	3196	3192	3192	304
15°	2993	2993	2963	2933	2921	841
25°	2594	2579	2537	2447	2379	1191
35°	2104	2089	1988	1837	1792	1316
45°	1615	1581	1446	1325	1272	1244
55°	1122	1088	986	870	824	1006
65°	666	629	568	580	482	657
75°	267	248	233	222	245	286
85°	38	41	45	49	53	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3256.5	3256.5	3256.5	3256.5	3256.5
2.5°	3233.9	3233.9	3233.9	3230.2	3230.2
5°	3200.0	3196.3	3196.3	3192.5	3192.5
7.5°	3173.7	3169.9	3166.2	3162.4	3154.9
10°	3136.0	3136.0	3132.3	3113.4	3109.7
12.5°	3075.8	3072.0	3057.0	3030.6	3023.1
15°	2993.0	2993.0	2962.9	2932.7	2921.4
17.5°	2902.6	2898.9	2861.2	2831.1	2816.0
20°	2804.7	2797.2	2759.6	2710.6	2684.3
22.5°	2695.6	2695.6	2650.4	2586.4	2560.0
25°	2593.9	2578.9	2537.4	2447.1	2379.3
27.5°	2477.2	2454.6	2409.4	2281.4	2202.4
30°	2349.2	2337.9	2273.9	2108.3	2048.0
32.5°	2228.7	2209.9	2142.1	1969.0	1920.0
35°	2104.5	2089.4	1987.8	1837.2	1792.0
37.5°	1980.3	1961.4	1833.4	1713.0	1656.5
40°	1856.0	1833.4	1694.1	1585.0	1524.7
42.5°	1739.3	1709.2	1573.7	1457.0	1389.2
45°	1615.1	1581.2	1445.7	1325.2	1272.5
47.5°	1490.8	1460.7	1336.5	1212.2	1152.0
50°	1359.1	1332.7	1219.8	1095.5	1031.5
52.5°	1249.9	1208.5	1099.3	975.1	922.4
55°	1121.9	1088.0	986.4	869.7	824.5
57.5°	1005.2	971.3	877.2	768.0	730.4
60°	896.0	847.1	768.0	673.9	643.8
62.5°	775.5	737.9	670.1	591.1	628.7
65°	666.4	628.7	568.5	579.8	481.9
67.5°	545.9	527.1	474.4	421.7	406.6
70°	444.2	421.7	402.8	346.4	331.3
72.5°	353.9	331.3	304.9	274.8	263.5
75°	267.3	248.5	233.4	222.1	244.7
77.5°	184.5	176.9	165.6	154.4	150.6
80°	120.5	116.7	112.9	109.2	105.4
82.5°	71.5	71.5	71.5	71.5	71.5
85°	37.6	41.4	45.2	48.9	52.7
87.5°	22.6	22.6	26.4	30.1	33.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)