

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: P562484

Luminaire Tested: FSR-24-4-LD4-2HI-35-UNV-80-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562484
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-LD4-2HI-35-UNV-80-86-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7763.0 lumens
Efficiency: N/A
Efficacy: 89.8 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

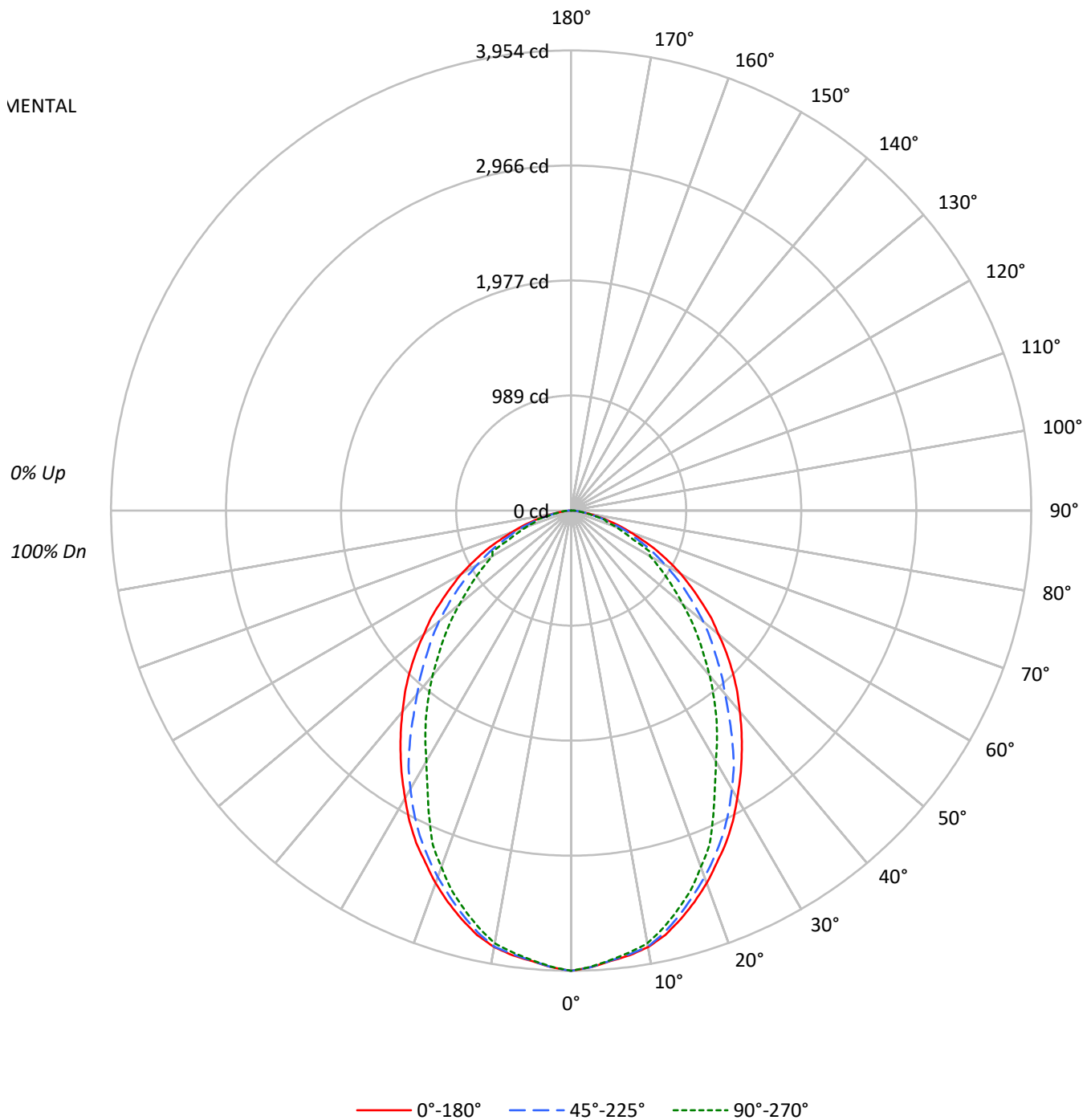
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5321	5321	5321
5°	5248	5242	5236
10°	5203	5197	5159
15°	5063	5012	4942
20°	4877	4798	4667
25°	4676	4574	4289
30°	4432	4290	3864
35°	4198	3965	3574
40°	3959	3613	3252
45°	3732	3340	2940
50°	3454	3100	2622
55°	3196	2810	2349
60°	2928	2510	2104
65°	2576	2198	1863
70°	2122	1924	1583
75°	1687	1473	1544
80°	1134	1062	992
85°	706	848	988

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3732 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	368.1	4.7
10°-20°	1010.2	13.0
20°-30°	1398.6	18.0
30°-40°	1491.3	19.2
40°-50°	1360.5	17.5
50°-60°	1065.8	13.7
60°-70°	694.6	8.9
70°-80°	307.8	4.0
80°-90°	66.1	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°	2776.9	35.8
0°-40°	4268.2	55.0
0°-60°	6694.5	86.2
0°-90°	7763.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7763.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3954	3954	3954	3954	3954	
5°	3886	3881	3881	3877	3877	369
15°	3634	3634	3598	3561	3548	1022
25°	3150	3132	3081	2972	2889	1446
35°	2556	2537	2414	2231	2176	1598
45°	1961	1920	1756	1609	1545	1511
55°	1362	1321	1198	1056	1001	1222
65°	809	763	690	704	585	797
75°	325	302	283	270	297	348
85°	46	50	55	59	64	63
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3954.4	3954.4	3954.4	3954.4	3954.4
2.5°	3926.9	3926.9	3926.9	3922.4	3922.4
5°	3885.8	3881.2	3881.2	3876.7	3876.7
7.5°	3853.8	3849.2	3844.7	3840.1	3830.9
10°	3808.1	3808.1	3803.5	3780.7	3776.1
12.5°	3734.9	3730.4	3712.1	3680.1	3670.9
15°	3634.4	3634.4	3597.8	3561.2	3547.5
17.5°	3524.6	3520.1	3474.4	3437.8	3419.5
20°	3405.8	3396.6	3350.9	3291.5	3259.5
22.5°	3273.2	3273.2	3218.4	3140.6	3108.6
25°	3149.8	3131.5	3081.2	2971.5	2889.2
27.5°	3008.1	2980.6	2925.8	2770.3	2674.3
30°	2852.6	2838.9	2761.2	2560.1	2486.9
32.5°	2706.3	2683.5	2601.2	2390.9	2331.5
35°	2555.5	2537.2	2413.8	2230.9	2176.0
37.5°	2404.6	2381.8	2226.3	2080.0	2011.5
40°	2253.8	2226.3	2057.2	1924.6	1851.5
42.5°	2112.0	2075.5	1910.9	1769.2	1686.9
45°	1961.2	1920.0	1755.5	1609.2	1545.2
47.5°	1810.3	1773.8	1622.9	1472.0	1398.9
50°	1650.3	1618.3	1481.2	1330.3	1252.6
52.5°	1517.7	1467.5	1334.9	1184.0	1120.0
55°	1362.3	1321.2	1197.7	1056.0	1001.2
57.5°	1220.6	1179.5	1065.2	932.6	886.9
60°	1088.0	1028.6	932.6	818.3	781.7
62.5°	941.7	896.0	813.7	717.7	763.4
65°	809.2	763.4	690.3	704.0	585.2
67.5°	662.9	640.0	576.0	512.0	493.7
70°	539.4	512.0	489.2	420.6	402.3
72.5°	429.7	402.3	370.3	333.7	320.0
75°	324.6	301.7	283.4	269.7	297.1
77.5°	224.0	214.9	201.1	187.4	182.9
80°	146.3	141.7	137.1	132.6	128.0
82.5°	86.9	86.9	86.9	86.9	86.9
85°	45.7	50.3	54.9	59.4	64.0
87.5°	27.4	27.4	32.0	36.6	41.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)