

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: P561336

Luminaire Tested: FSR-12-4-LD4-2HI-35-UNV-80-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561336
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-80-88-EDD-90
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5757.0 lumens
Efficiency: N/A
Efficacy: 66.6 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

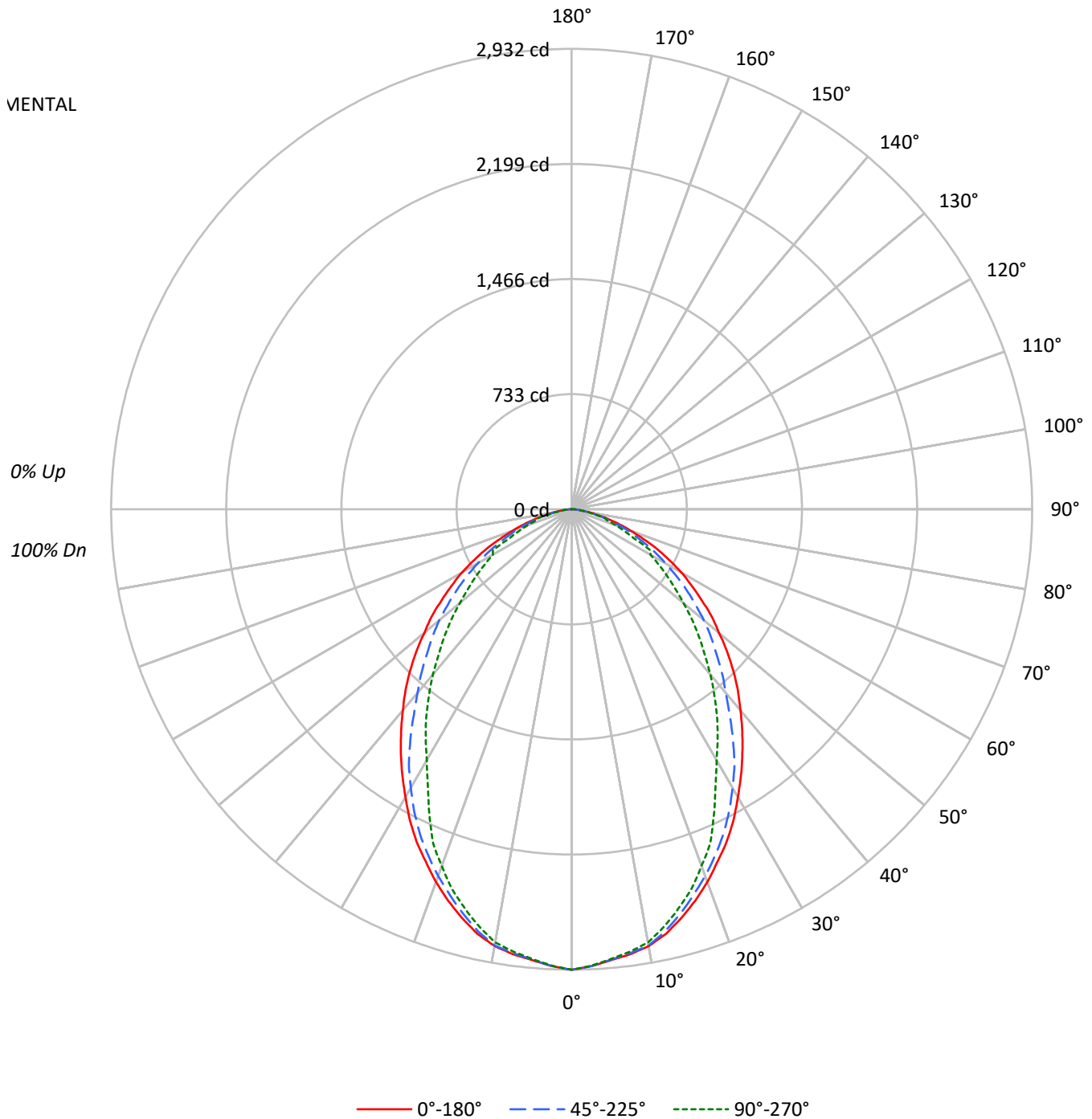
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	7891	7891	7891
5°	7784	7775	7766
10°	7717	7708	7652
15°	7509	7433	7329
20°	7233	7116	6922
25°	6936	6785	6362
30°	6573	6363	5731
35°	6226	5880	5301
40°	5871	5359	4823
45°	5535	4954	4361
50°	5124	4598	3889
55°	4740	4167	3483
60°	4343	3722	3120
65°	3821	3259	2763
70°	3147	2854	2347
75°	2503	2185	2292
80°	1681	1576	1471
85°	1047	1257	1467

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5535 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	273.0	4.7
10°-20°	749.2	13.0
20°-30°	1037.2	18.0
30°-40°	1105.9	19.2
40°-50°	1008.9	17.5
50°-60°	790.4	13.7
60°-70°	515.2	8.9
70°-80°	228.2	4.0
80°-90°	49.0	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°	2059.3	35.8
0°-40°	3165.3	55.0
0°-60°	4964.6	86.2
0°-90°	5757.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5757.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2932	2932	2932	2932	2932	
5°	2882	2878	2878	2875	2875	274
15°	2695	2695	2668	2641	2631	758
25°	2336	2322	2285	2204	2143	1072
35°	1895	1882	1790	1654	1614	1185
45°	1454	1424	1302	1193	1146	1120
55°	1010	980	888	783	742	906
65°	600	566	512	522	434	591
75°	241	224	210	200	220	258
85°	34	37	41	44	48	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2932.5	2932.5	2932.5	2932.5	2932.5
2.5°	2912.2	2912.2	2912.2	2908.8	2908.8
5°	2881.7	2878.3	2878.3	2874.9	2874.9
7.5°	2858.0	2854.6	2851.2	2847.8	2841.0
10°	2824.1	2824.1	2820.7	2803.7	2800.3
12.5°	2769.8	2766.4	2752.9	2729.1	2722.3
15°	2695.2	2695.2	2668.1	2641.0	2630.8
17.5°	2613.9	2610.5	2576.6	2549.4	2535.9
20°	2525.7	2518.9	2485.0	2441.0	2417.2
22.5°	2427.4	2427.4	2386.7	2329.1	2305.3
25°	2335.9	2322.3	2285.0	2203.6	2142.6
27.5°	2230.8	2210.4	2169.7	2054.5	1983.3
30°	2115.5	2105.3	2047.7	1898.5	1844.3
32.5°	2007.0	1990.1	1929.0	1773.1	1729.0
35°	1895.1	1881.6	1790.0	1654.4	1613.7
37.5°	1783.3	1766.3	1651.0	1542.5	1491.7
40°	1671.4	1651.0	1525.6	1427.3	1373.0
42.5°	1566.3	1539.2	1417.1	1312.0	1251.0
45°	1454.4	1423.9	1301.8	1193.4	1145.9
47.5°	1342.5	1315.4	1203.5	1091.7	1037.4
50°	1223.9	1200.1	1098.4	986.6	928.9
52.5°	1125.6	1088.3	989.9	878.1	830.6
55°	1010.3	979.8	888.2	783.1	742.5
57.5°	905.2	874.7	789.9	691.6	657.7
60°	806.9	762.8	691.6	606.8	579.7
62.5°	698.4	664.5	603.5	532.3	566.2
65°	600.1	566.2	511.9	522.1	433.9
67.5°	491.6	474.6	427.2	379.7	366.1
70°	400.0	379.7	362.8	311.9	298.3
72.5°	318.7	298.3	274.6	247.5	237.3
75°	240.7	223.8	210.2	200.0	220.4
77.5°	166.1	159.3	149.2	139.0	135.6
80°	108.5	105.1	101.7	98.3	94.9
82.5°	64.4	64.4	64.4	64.4	64.4
85°	33.9	37.3	40.7	44.1	47.5
87.5°	20.3	20.3	23.7	27.1	30.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)