

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: P561265

Luminaire Tested: FSR-12-4-LD4-1STD-50-UNV-80-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561265
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-LD4-1STD-50-UNV-80-84-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

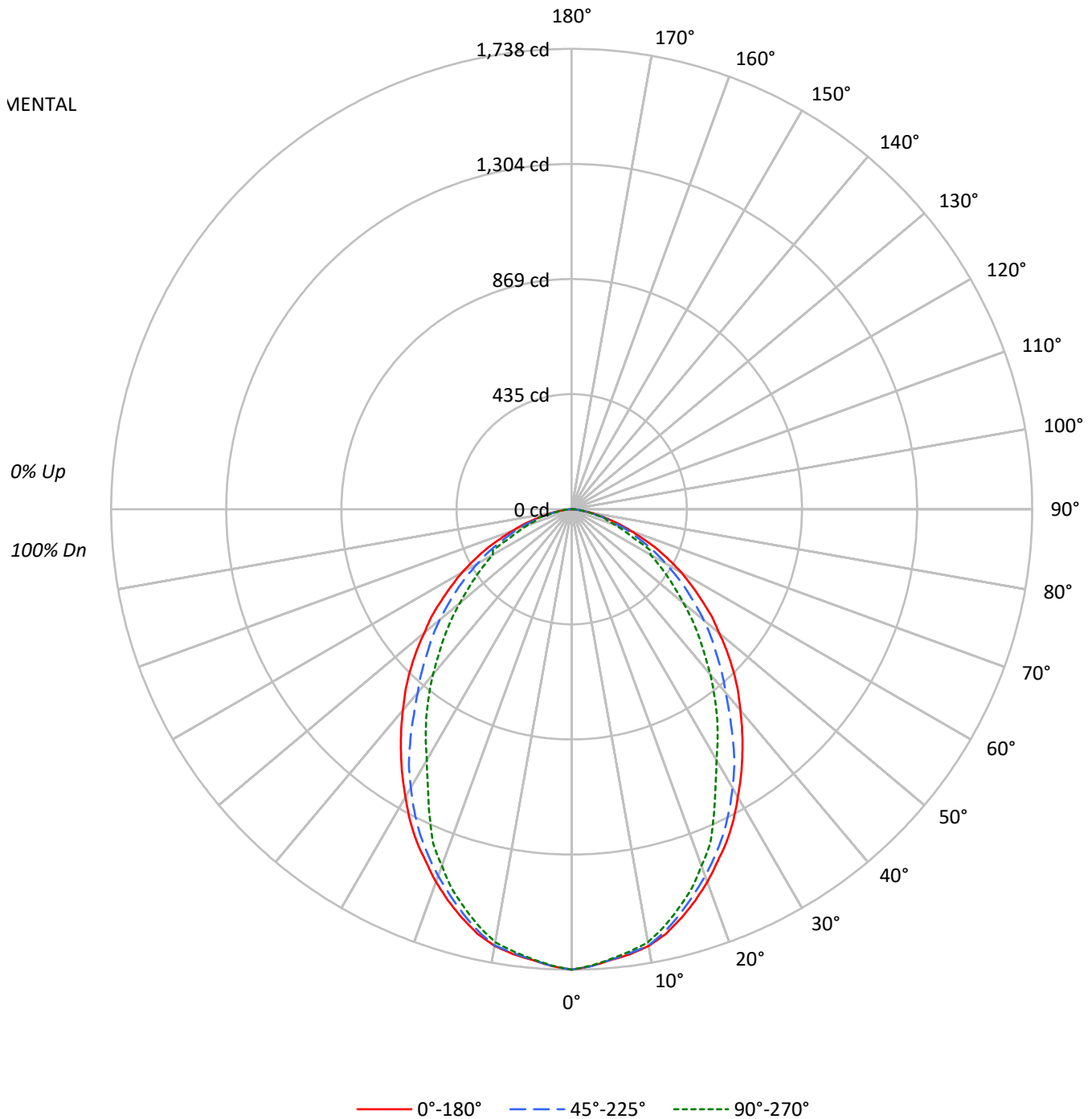
Lumens per Lamp: N/A
Luminaire Lumens: 3412.0 lumens
Efficiency: N/A
Efficacy: 102.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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°	4677	4677	4677
5°	4613	4608	4603
10°	4573	4568	4535
15°	4450	4405	4344
20°	4287	4218	4103
25°	4111	4021	3771
30°	3896	3771	3396
35°	3690	3485	3142
40°	3480	3176	2859
45°	3280	2936	2584
50°	3037	2725	2305
55°	2809	2470	2064
60°	2574	2206	1849
65°	2264	1932	1638
70°	1865	1692	1391
75°	1484	1295	1358
80°	996	934	872
85°	621	744	868

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3280 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	161.8	4.7
10°-20°	444.0	13.0
20°-30°	614.7	18.0
30°-40°	655.5	19.2
40°-50°	598.0	17.5
50°-60°	468.5	13.7
60°-70°	305.3	8.9
70°-80°	135.3	4.0
80°-90°	29.1	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°	1220.5	35.8
0°-40°	1876.0	55.0
0°-60°	2942.4	86.2
0°-90°	3412.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3412.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1738	1738	1738	1738	1738	
5°	1708	1706	1706	1704	1704	162
15°	1597	1597	1581	1565	1559	449
25°	1384	1376	1354	1306	1270	636
35°	1123	1115	1061	980	956	702
45°	862	844	772	707	679	664
55°	599	581	526	464	440	537
65°	356	336	303	309	257	350
75°	143	133	125	118	131	153
85°	20	22	24	26	28	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1738.0	1738.0	1738.0	1738.0	1738.0
2.5°	1726.0	1726.0	1726.0	1724.0	1724.0
5°	1707.9	1705.9	1705.9	1703.9	1703.9
7.5°	1693.8	1691.8	1689.8	1687.8	1683.8
10°	1673.7	1673.7	1671.7	1661.7	1659.7
12.5°	1641.6	1639.6	1631.5	1617.5	1613.5
15°	1597.4	1597.4	1581.3	1565.2	1559.2
17.5°	1549.2	1547.1	1527.1	1511.0	1502.9
20°	1496.9	1492.9	1472.8	1446.7	1432.6
22.5°	1438.6	1438.6	1414.5	1380.4	1366.3
25°	1384.4	1376.4	1354.3	1306.0	1269.9
27.5°	1322.1	1310.1	1285.9	1217.6	1175.4
30°	1253.8	1247.8	1213.6	1125.2	1093.0
32.5°	1189.5	1179.4	1143.3	1050.9	1024.7
35°	1123.2	1115.2	1060.9	980.5	956.4
37.5°	1056.9	1046.8	978.5	914.2	884.1
40°	990.6	978.5	904.2	845.9	813.8
42.5°	928.3	912.2	839.9	777.6	741.4
45°	862.0	843.9	771.6	707.3	679.1
47.5°	795.7	779.6	713.3	647.0	614.8
50°	725.4	711.3	651.0	584.7	550.5
52.5°	667.1	645.0	586.7	520.4	492.3
55°	598.8	580.7	526.4	464.1	440.0
57.5°	536.5	518.4	468.2	409.9	389.8
60°	478.2	452.1	409.9	359.7	343.6
62.5°	413.9	393.8	357.7	315.5	335.5
65°	355.6	335.5	303.4	309.4	257.2
67.5°	291.3	281.3	253.2	225.0	217.0
70°	237.1	225.0	215.0	184.9	176.8
72.5°	188.9	176.8	162.8	146.7	140.6
75°	142.7	132.6	124.6	118.5	130.6
77.5°	98.5	94.4	88.4	82.4	80.4
80°	64.3	62.3	60.3	58.3	56.3
82.5°	38.2	38.2	38.2	38.2	38.2
85°	20.1	22.1	24.1	26.1	28.1
87.5°	12.1	12.1	14.1	16.1	18.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)