

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: P561267

Luminaire Tested: FSR-12-4-LD4-1STD-50-UNV-80-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561267
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-80-85-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

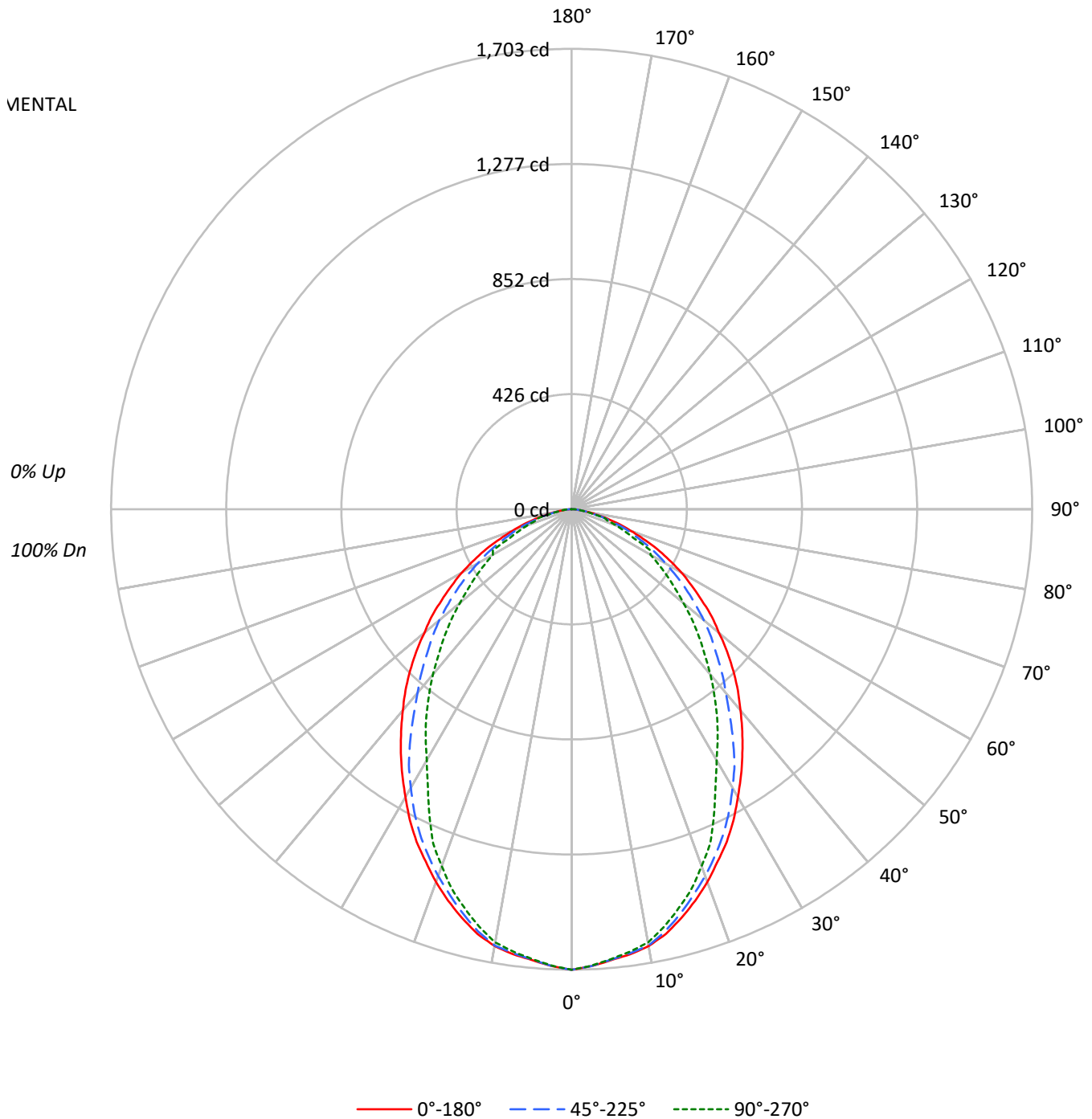
Lumens per Lamp: N/A
Luminaire Lumens: 3344.0 lumens
Efficiency: N/A
Efficacy: 100.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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				
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°	4584	4584	4584
5°	4522	4516	4511
10°	4482	4477	4445
15°	4361	4318	4257
20°	4201	4133	4021
25°	4029	3941	3695
30°	3818	3696	3329
35°	3616	3416	3079
40°	3410	3113	2801
45°	3215	2878	2533
50°	2976	2671	2259
55°	2753	2420	2023
60°	2523	2162	1812
65°	2220	1894	1605
70°	1828	1658	1364
75°	1454	1269	1331
80°	976	916	854
85°	608	729	852

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3215 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	158.6	4.7
10°-20°	435.2	13.0
20°-30°	602.5	18.0
30°-40°	642.4	19.2
40°-50°	586.0	17.5
50°-60°	459.1	13.7
60°-70°	299.3	8.9
70°-80°	132.6	4.0
80°-90°	28.5	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°	1196.2	35.8
0°-40°	1838.6	55.0
0°-60°	2883.7	86.2
0°-90°	3344.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3344.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1703	1703	1703	1703	1703	
5°	1674	1672	1672	1670	1670	159
15°	1566	1566	1550	1534	1528	440
25°	1357	1349	1327	1280	1245	623
35°	1101	1093	1040	961	937	688
45°	845	827	756	693	666	651
55°	587	569	516	455	431	526
65°	349	329	297	303	252	344
75°	140	130	122	116	128	150
85°	20	22	24	26	28	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1703.4	1703.4	1703.4	1703.4	1703.4
2.5°	1691.6	1691.6	1691.6	1689.6	1689.6
5°	1673.9	1671.9	1671.9	1669.9	1669.9
7.5°	1660.1	1658.1	1656.1	1654.2	1650.2
10°	1640.4	1640.4	1638.4	1628.6	1626.6
12.5°	1608.9	1606.9	1599.0	1585.2	1581.3
15°	1565.5	1565.5	1549.8	1534.0	1528.1
17.5°	1518.3	1516.3	1496.6	1480.9	1473.0
20°	1467.1	1463.1	1443.4	1417.8	1404.1
22.5°	1410.0	1410.0	1386.3	1352.9	1339.1
25°	1356.8	1348.9	1327.3	1280.0	1244.6
27.5°	1295.8	1283.9	1260.3	1193.4	1152.0
30°	1228.8	1222.9	1189.4	1102.8	1071.3
32.5°	1165.8	1155.9	1120.5	1029.9	1004.3
35°	1100.8	1092.9	1039.8	961.0	937.4
37.5°	1035.8	1026.0	959.0	896.0	866.5
40°	970.8	959.0	886.2	829.0	797.5
42.5°	909.8	894.0	823.1	762.1	726.6
45°	844.8	827.1	756.2	693.2	665.6
47.5°	779.8	764.1	699.1	634.1	602.6
50°	710.9	697.1	638.0	573.0	539.6
52.5°	653.8	632.1	575.0	510.0	482.5
55°	586.8	569.1	515.9	454.9	431.3
57.5°	525.8	508.1	458.8	401.7	382.0
60°	468.7	443.1	401.7	352.5	336.7
62.5°	405.7	386.0	350.5	309.2	328.9
65°	348.6	328.9	297.4	303.3	252.1
67.5°	285.5	275.7	248.1	220.6	212.7
70°	232.4	220.6	210.7	181.2	173.3
72.5°	185.1	173.3	159.5	143.8	137.8
75°	139.8	130.0	122.1	116.2	128.0
77.5°	96.5	92.6	86.6	80.7	78.8
80°	63.0	61.0	59.1	57.1	55.1
82.5°	37.4	37.4	37.4	37.4	37.4
85°	19.7	21.7	23.6	25.6	27.6
87.5°	11.8	11.8	13.8	15.8	17.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)