

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: P560285

Luminaire Tested: FSR-12-2-LD4-2HI-40-UNV-82-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560285
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-12-2-LD4-2HI-40-UNV-82-96-EDD
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3484.0 lumens
Efficiency: N/A
Efficacy: 80.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

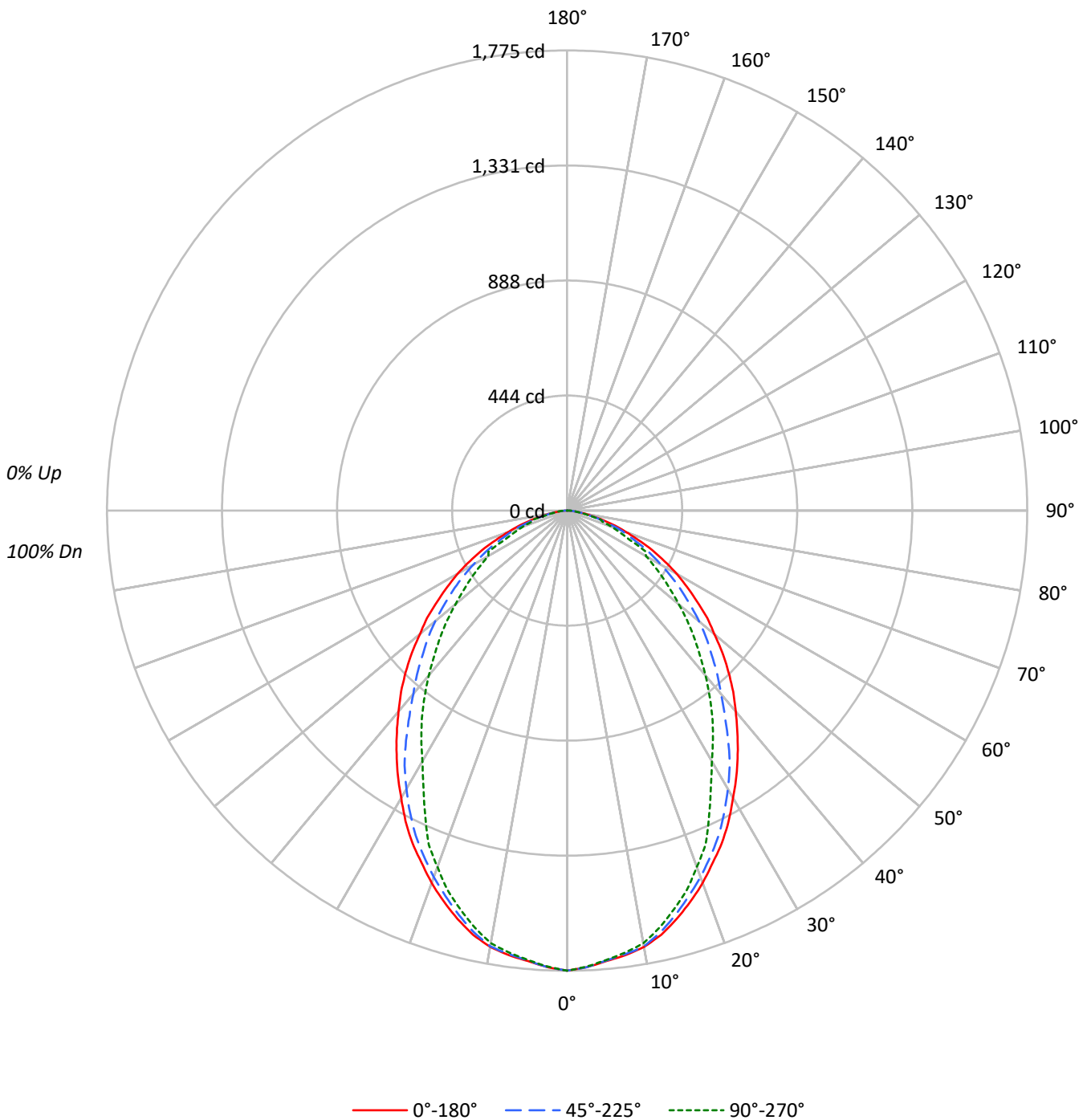
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	9551	9551	9551
5°	9421	9411	9399
10°	9340	9329	9262
15°	9088	8997	8871
20°	8754	8613	8378
25°	8394	8212	7700
30°	7956	7701	6936
35°	7535	7117	6416
40°	7106	6487	5838
45°	6699	5996	5278
50°	6202	5565	4707
55°	5737	5043	4216
60°	5256	4505	3776
65°	4624	3945	3344
70°	3810	3454	2840
75°	3030	2645	2774
80°	2036	1909	1779
85°	1266	1519	1772

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6699 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	165.2	4.7
10°-20°	453.4	13.0
20°-30°	627.7	18.0
30°-40°	669.3	19.2
40°-50°	610.6	17.5
50°-60°	478.3	13.7
60°-70°	311.8	8.9
70°-80°	138.1	4.0
80°-90°	29.7	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°	1246.3	35.8
0°-40°	1915.5	55.0
0°-60°	3004.5	86.2
0°-90°	3484.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3484.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1775	1775	1775	1775	1775	
5°	1744	1742	1742	1740	1740	166
15°	1631	1631	1615	1598	1592	459
25°	1414	1405	1383	1334	1297	649
35°	1147	1139	1083	1001	977	717
45°	880	862	788	722	694	678
55°	611	593	538	474	449	548
65°	363	343	310	316	263	358
75°	146	135	127	121	133	156
85°	20	23	25	27	29	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1774.7	1774.7	1774.7	1774.7	1774.7
2.5°	1762.4	1762.4	1762.4	1760.3	1760.3
5°	1743.9	1741.9	1741.9	1739.8	1739.8
7.5°	1729.6	1727.5	1725.5	1723.4	1719.3
10°	1709.0	1709.0	1707.0	1696.7	1694.7
12.5°	1676.2	1674.2	1666.0	1651.6	1647.5
15°	1631.1	1631.1	1614.7	1598.3	1592.1
17.5°	1581.8	1579.8	1559.3	1542.9	1534.7
20°	1528.5	1524.4	1503.9	1477.2	1462.8
22.5°	1469.0	1469.0	1444.4	1409.5	1395.1
25°	1413.6	1405.4	1382.8	1333.6	1296.7
27.5°	1350.0	1337.7	1313.1	1243.3	1200.2
30°	1280.2	1274.1	1239.2	1148.9	1116.1
32.5°	1214.6	1204.3	1167.4	1073.0	1046.4
35°	1146.9	1138.7	1083.3	1001.2	976.6
37.5°	1079.2	1068.9	999.2	933.5	902.7
40°	1011.5	999.2	923.3	863.8	830.9
42.5°	947.9	931.5	857.6	794.0	757.1
45°	880.2	861.7	787.8	722.2	693.5
47.5°	812.5	796.1	728.3	660.6	627.8
50°	740.7	726.3	664.7	597.0	562.2
52.5°	681.2	658.6	599.1	531.4	502.7
55°	611.4	592.9	537.5	473.9	449.3
57.5°	547.8	529.3	478.0	418.5	398.0
60°	488.3	461.6	418.5	367.3	350.8
62.5°	422.6	402.1	365.2	322.1	342.6
65°	363.1	342.6	309.8	316.0	262.6
67.5°	297.5	287.2	258.5	229.8	221.6
70°	242.1	229.8	219.5	188.8	180.5
72.5°	192.9	180.5	166.2	149.8	143.6
75°	145.7	135.4	127.2	121.0	133.4
77.5°	100.5	96.4	90.3	84.1	82.1
80°	65.7	63.6	61.6	59.5	57.4
82.5°	39.0	39.0	39.0	39.0	39.0
85°	20.5	22.6	24.6	26.7	28.7
87.5°	12.3	12.3	14.4	16.4	18.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)