

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: P560224

Luminaire Tested: FSR-12-2-LD4-2HI-35-UNV-93-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560224
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-35-UNV-93-84-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3137.0 lumens
Efficiency: N/A
Efficacy: 72.6 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

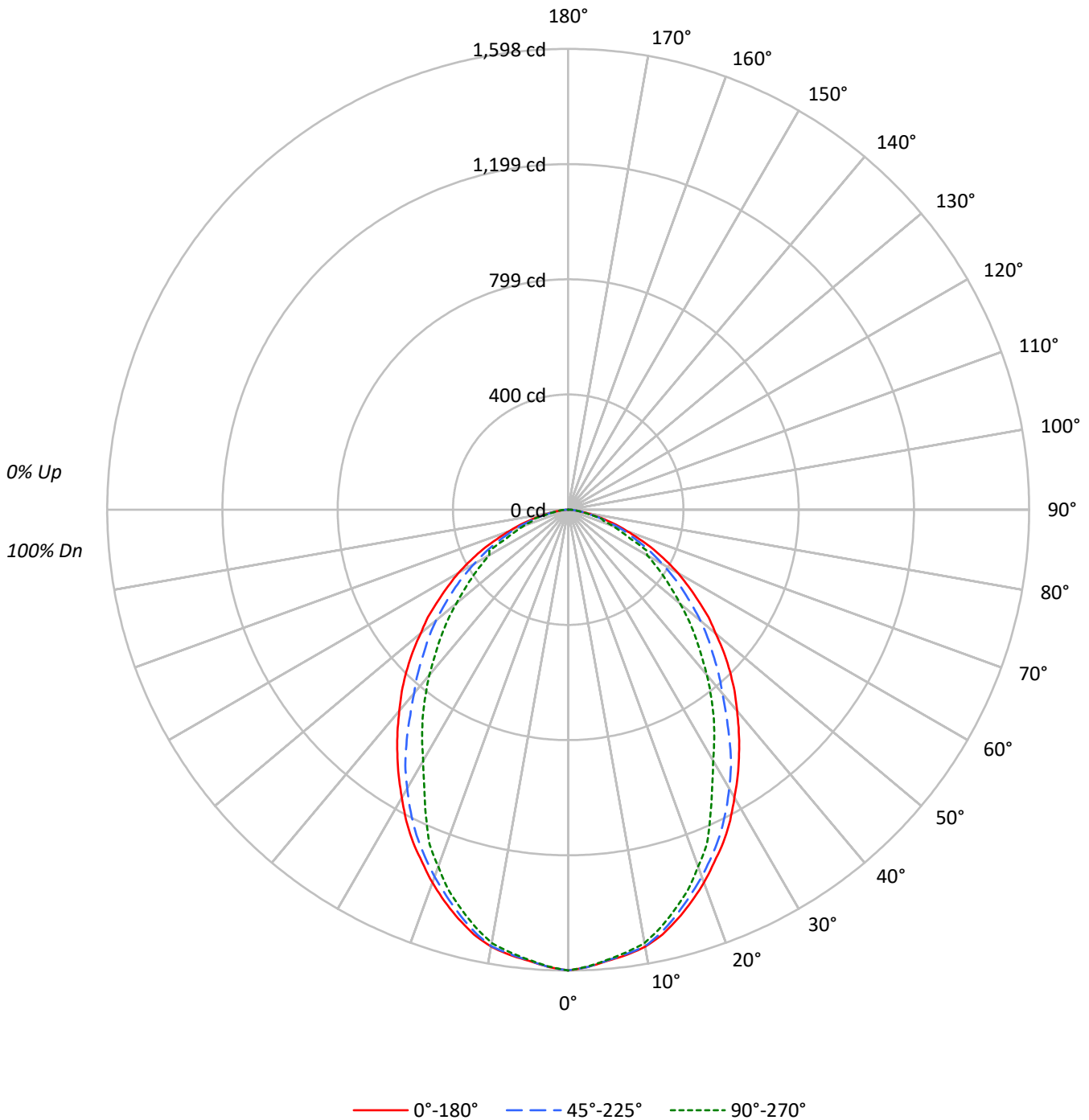
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0																			
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	8600	8600	8600
5°	8483	8473	8463
10°	8410	8400	8339
15°	8183	8101	7987
20°	7883	7755	7544
25°	7558	7394	6933
30°	7164	6934	6246
35°	6785	6409	5777
40°	6398	5840	5257
45°	6032	5399	4752
50°	5584	5011	4238
55°	5165	4541	3796
60°	4733	4057	3400
65°	4164	3552	3012
70°	3430	3111	2559
75°	2728	2381	2497
80°	1832	1717	1602
85°	1142	1371	1599

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6032 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.7	4.7
10°-20°	408.2	13.0
20°-30°	565.2	18.0
30°-40°	602.6	19.2
40°-50°	549.8	17.5
50°-60°	430.7	13.7
60°-70°	280.7	8.9
70°-80°	124.4	4.0
80°-90°	26.7	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°	1122.1	35.8
0°-40°	1724.8	55.0
0°-60°	2705.2	86.2
0°-90°	3137.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3137.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1598	1598	1598	1598	1598	
5°	1570	1568	1568	1566	1566	149
15°	1469	1469	1454	1439	1434	413
25°	1273	1265	1245	1201	1168	584
35°	1033	1025	975	902	879	646
45°	792	776	709	650	624	610
55°	550	534	484	427	405	494
65°	327	308	279	284	236	322
75°	131	122	114	109	120	141
85°	18	20	22	24	26	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1597.9	1597.9	1597.9	1597.9	1597.9
2.5°	1586.9	1586.9	1586.9	1585.0	1585.0
5°	1570.2	1568.4	1568.4	1566.5	1566.5
7.5°	1557.3	1555.5	1553.6	1551.8	1548.1
10°	1538.8	1538.8	1537.0	1527.7	1525.9
12.5°	1509.3	1507.4	1500.0	1487.1	1483.4
15°	1468.6	1468.6	1453.9	1439.1	1433.5
17.5°	1424.3	1422.4	1404.0	1389.2	1381.8
20°	1376.3	1372.6	1354.1	1330.1	1317.2
22.5°	1322.7	1322.7	1300.5	1269.1	1256.2
25°	1272.8	1265.4	1245.1	1200.8	1167.5
27.5°	1215.5	1204.5	1182.3	1119.5	1080.7
30°	1152.7	1147.2	1115.8	1034.5	1005.0
32.5°	1093.6	1084.4	1051.1	966.2	942.1
35°	1032.7	1025.3	975.4	901.5	879.3
37.5°	971.7	962.5	899.7	840.5	812.8
40°	910.7	899.7	831.3	777.7	748.2
42.5°	853.5	838.7	772.2	714.9	681.7
45°	792.5	775.9	709.4	650.3	624.4
47.5°	731.5	716.8	655.8	594.8	565.3
50°	666.9	654.0	598.5	537.6	506.2
52.5°	613.3	593.0	539.4	478.5	452.6
55°	550.5	533.9	484.0	426.7	404.6
57.5°	493.2	476.6	430.4	376.9	358.4
60°	439.7	415.7	376.9	330.7	315.9
62.5°	380.6	362.1	328.8	290.0	308.5
65°	327.0	308.5	278.9	284.5	236.5
67.5°	267.9	258.6	232.8	206.9	199.5
70°	218.0	206.9	197.7	170.0	162.6
72.5°	173.6	162.6	149.6	134.9	129.3
75°	131.2	121.9	114.5	109.0	120.1
77.5°	90.5	86.8	81.3	75.7	73.9
80°	59.1	57.3	55.4	53.6	51.7
82.5°	35.1	35.1	35.1	35.1	35.1
85°	18.5	20.3	22.2	24.0	25.9
87.5°	11.1	11.1	12.9	14.8	16.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)