

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: P562223

Luminaire Tested: FSR-24-4-LD4-1LO-40-UNV-93-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562223
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-24-4-LD4-1LO-40-UNV-93-97-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2818.0 lumens
Efficiency: N/A
Efficacy: 120.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

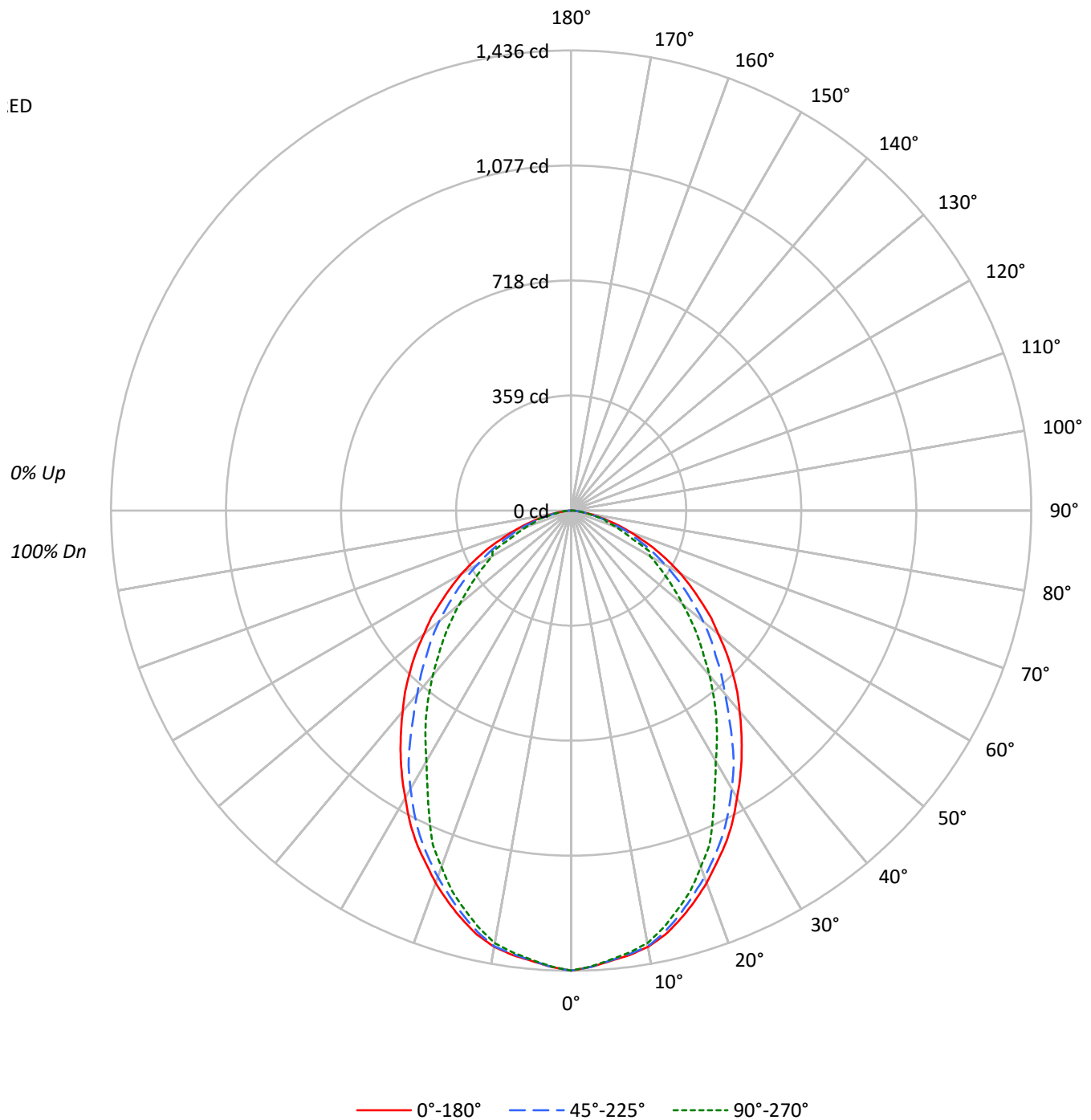
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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°	1931	1931	1931
5°	1905	1903	1901
10°	1889	1886	1873
15°	1838	1819	1794
20°	1770	1742	1694
25°	1697	1661	1557
30°	1609	1557	1403
35°	1524	1439	1297
40°	1437	1312	1180
45°	1355	1212	1067
50°	1254	1126	952
55°	1160	1020	852
60°	1063	911	764
65°	935	798	676
70°	770	699	574
75°	612	535	561
80°	411	386	360
85°	256	307	358

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1355 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.6	4.7
10°-20°	366.7	13.0
20°-30°	507.7	18.0
30°-40°	541.3	19.2
40°-50°	493.9	17.5
50°-60°	386.9	13.7
60°-70°	252.2	8.9
70°-80°	111.7	4.0
80°-90°	24.0	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°	1008.0	35.8
0°-40°	1549.4	55.0
0°-60°	2430.1	86.2
0°-90°	2818.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2818.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1436	1436	1436	1436	1436	
5°	1411	1409	1409	1407	1407	134
15°	1319	1319	1306	1293	1288	371
25°	1143	1137	1118	1079	1049	525
35°	928	921	876	810	790	580
45°	712	697	637	584	561	548
55°	494	480	435	383	363	444
65°	294	277	251	256	212	289
75°	118	110	103	98	108	126
85°	17	18	20	22	23	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1435.5	1435.5	1435.5	1435.5	1435.5
2.5°	1425.5	1425.5	1425.5	1423.8	1423.8
5°	1410.6	1408.9	1408.9	1407.2	1407.2
7.5°	1398.9	1397.3	1395.6	1394.0	1390.6
10°	1382.3	1382.3	1380.7	1372.4	1370.7
12.5°	1355.8	1354.1	1347.5	1335.9	1332.6
15°	1319.3	1319.3	1306.0	1292.7	1287.8
17.5°	1279.5	1277.8	1261.2	1247.9	1241.3
20°	1236.3	1233.0	1216.4	1194.8	1183.2
22.5°	1188.2	1188.2	1168.3	1140.1	1128.4
25°	1143.4	1136.7	1118.5	1078.7	1048.8
27.5°	1091.9	1082.0	1062.1	1005.6	970.8
30°	1035.5	1030.5	1002.3	929.3	902.8
32.5°	982.4	974.1	944.2	867.9	846.3
35°	927.7	921.0	876.2	809.8	789.9
37.5°	872.9	864.6	808.2	755.1	730.2
40°	818.1	808.2	746.8	698.6	672.1
42.5°	766.7	753.4	693.7	642.2	612.3
45°	711.9	697.0	637.2	584.1	560.9
47.5°	657.2	643.9	589.1	534.4	507.8
50°	599.1	587.5	537.7	482.9	454.7
52.5°	550.9	532.7	484.6	429.8	406.6
55°	494.5	479.6	434.8	383.3	363.4
57.5°	443.1	428.1	386.7	338.5	321.9
60°	395.0	373.4	338.5	297.0	283.8
62.5°	341.9	325.3	295.4	260.5	277.1
65°	293.7	277.1	250.6	255.6	212.4
67.5°	240.6	232.3	209.1	185.9	179.2
70°	195.8	185.9	177.6	152.7	146.0
72.5°	156.0	146.0	134.4	121.1	116.2
75°	117.8	109.5	102.9	97.9	107.9
77.5°	81.3	78.0	73.0	68.0	66.4
80°	53.1	51.4	49.8	48.1	46.5
82.5°	31.5	31.5	31.5	31.5	31.5
85°	16.6	18.3	19.9	21.6	23.2
87.5°	10.0	10.0	11.6	13.3	14.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)