

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: P590612

Luminaire Tested: FSR-24-2-LD4-3LO-50-UNV-93-97-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590612
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-3LO-50-UNV-93-97-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

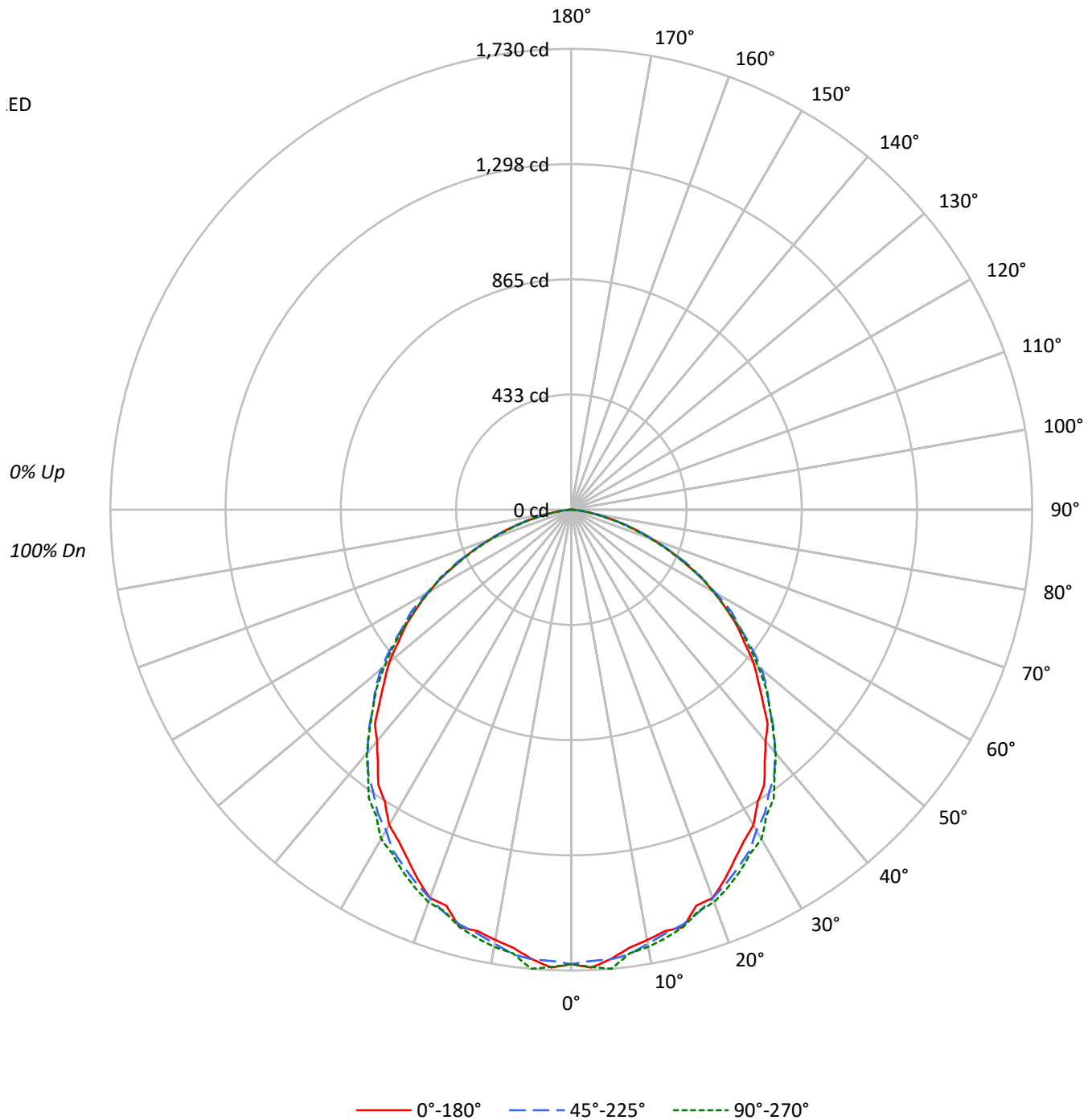
Lumens per Lamp: N/A
Luminaire Lumens: 4299.0 lumens
Efficiency: N/A
Efficacy: 122.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 35.1
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																												
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86																												
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73																												
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62																												
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53																												
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46																												
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41																												
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36																												
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32																												
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29																												
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4590	4590	4590
5°	4575	4577	4673
10°	4482	4521	4553
15°	4518	4493	4518
20°	4441	4441	4489
25°	4305	4399	4447
30°	4245	4320	4435
35°	4146	4254	4350
40°	3984	4176	4195
45°	3864	4001	4007
50°	3737	3906	3831
55°	3560	3630	3604
60°	3329	3363	3302
65°	2968	3044	2947
70°	2547	2555	2485
75°	2017	2013	1935
80°	1351	1314	1263
85°	735	729	679

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4104 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	160.4	3.7
10°-20°	454.7	10.6
20°-30°	681.3	15.8
30°-40°	807.5	18.8
40°-50°	809.0	18.8
50°-60°	686.7	16.0
60°-70°	462.9	10.8
70°-80°	203.4	4.7
80°-90°	33.1	0.8
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°	1296.5	30.2
0°-40°	2103.9	48.9
0°-60°	3599.6	83.7
0°-90°	4299.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4299.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1706	1706	1706	1706	1706	
5°	1694	1690	1694	1689	1730	160
15°	1622	1603	1613	1621	1622	452
25°	1450	1458	1482	1501	1498	670
35°	1262	1266	1295	1325	1324	784
45°	1015	1034	1051	1078	1053	785
55°	759	754	774	768	768	675
65°	466	460	478	460	463	464
75°	194	190	194	180	186	208
85°	24	23	24	23	22	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1705.7	1705.7	1705.7	1705.7	1705.7
2.5°	1720.5	1707.5	1695.4	1709.5	1718.1
5°	1693.6	1689.7	1694.3	1689.2	1730.0
7.5°	1658.8	1674.0	1682.8	1677.3	1679.7
10°	1640.3	1635.0	1654.6	1668.3	1666.3
12.5°	1620.5	1628.4	1629.5	1644.3	1645.6
15°	1621.6	1602.9	1612.8	1621.2	1621.8
17.5°	1558.6	1578.9	1585.7	1604.9	1581.1
20°	1550.9	1536.2	1550.9	1570.5	1567.4
22.5°	1503.6	1487.0	1518.8	1536.2	1535.1
25°	1449.8	1457.7	1481.5	1500.9	1497.8
27.5°	1402.7	1411.9	1445.9	1472.5	1455.3
30°	1366.3	1361.7	1390.4	1414.1	1427.4
32.5°	1301.4	1318.1	1351.6	1375.2	1362.6
35°	1262.0	1265.7	1295.0	1324.9	1324.1
37.5°	1193.0	1210.4	1251.6	1260.0	1252.3
40°	1134.2	1151.6	1188.8	1197.9	1194.1
42.5°	1090.8	1093.9	1125.9	1136.2	1119.7
45°	1015.3	1034.2	1051.4	1078.5	1053.0
47.5°	951.0	959.8	996.8	1004.1	990.6
50°	892.6	895.7	932.9	923.9	915.1
52.5°	819.3	832.3	853.2	851.4	841.1
55°	758.9	753.9	773.7	768.4	768.2
57.5°	686.5	695.3	711.6	703.2	689.8
60°	618.6	618.9	624.8	615.3	613.6
62.5°	543.1	545.7	547.1	535.4	554.3
65°	466.2	460.1	478.1	459.9	462.9
67.5°	395.5	398.6	396.9	385.4	389.8
70°	323.7	327.7	324.8	311.9	315.8
72.5°	258.1	253.3	256.4	240.1	247.5
75°	194.0	190.1	193.6	179.9	186.1
77.5°	132.1	135.2	133.0	125.8	129.9
80°	87.2	84.8	84.8	80.6	81.5
82.5°	50.9	48.5	47.8	46.5	48.5
85°	23.8	23.1	23.6	22.9	22.0
87.5°	8.6	8.8	8.8	8.4	7.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)