

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: P590579

Luminaire Tested: FSR-24-2-LD4-3LO-40-UNV-93-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590579
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-40-UNV-93-96-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

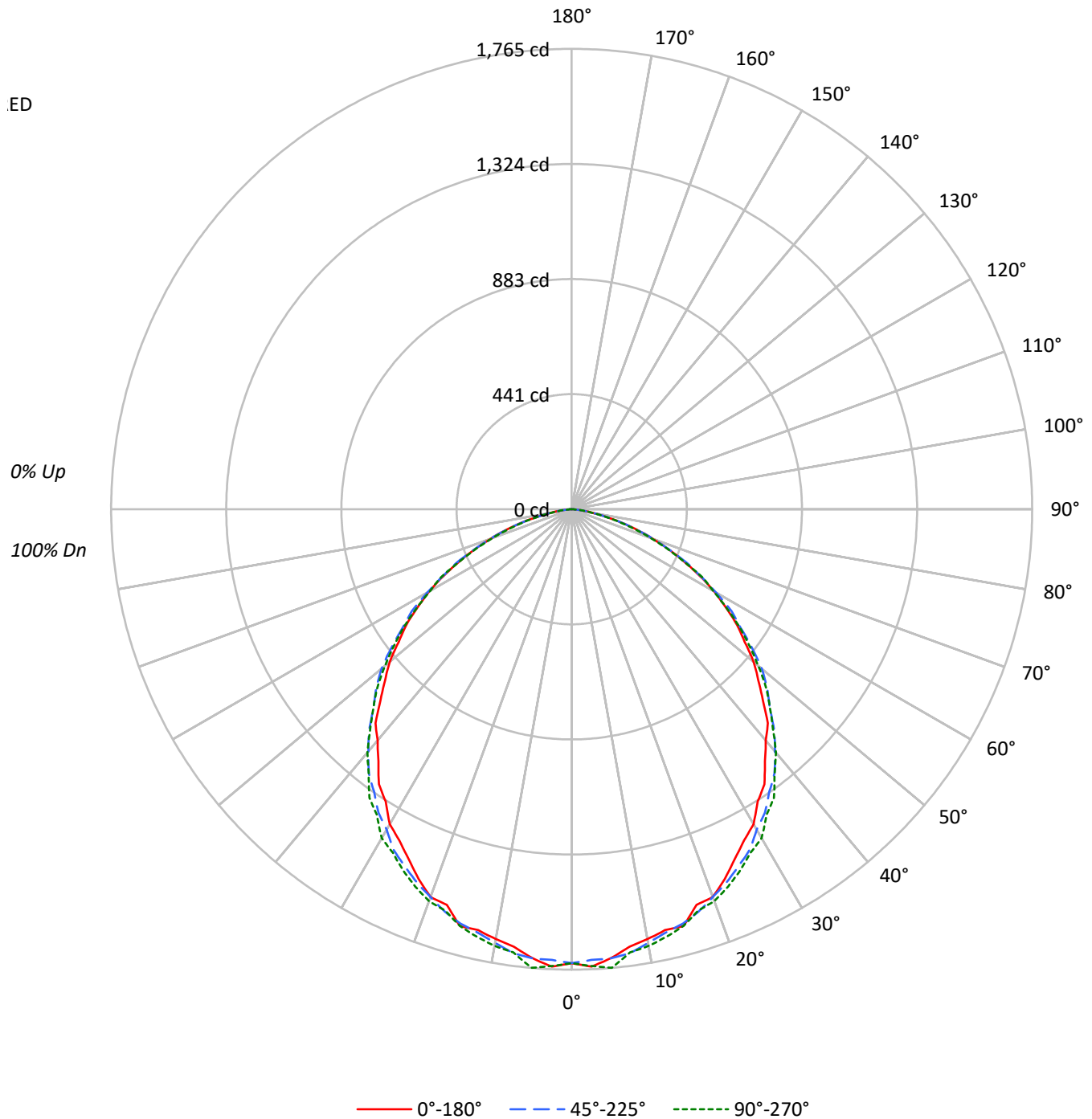
Lumens per Lamp: N/A
Luminaire Lumens: 4385.0 lumens
Efficiency: N/A
Efficacy: 124.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					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°	4682	4682	4682
5°	4666	4668	4767
10°	4572	4612	4644
15°	4608	4583	4609
20°	4530	4530	4578
25°	4391	4487	4536
30°	4331	4407	4524
35°	4229	4339	4437
40°	4064	4260	4279
45°	3941	4081	4087
50°	3812	3984	3908
55°	3632	3703	3676
60°	3396	3430	3369
65°	3028	3105	3007
70°	2598	2607	2534
75°	2058	2053	1973
80°	1379	1340	1288
85°	750	741	695

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4187 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	163.7	3.7
10°-20°	463.8	10.6
20°-30°	694.9	15.8
30°-40°	823.6	18.8
40°-50°	825.1	18.8
50°-60°	700.4	16.0
60°-70°	472.2	10.8
70°-80°	207.5	4.7
80°-90°	33.7	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°	1322.4	30.2
0°-40°	2146.0	48.9
0°-60°	3671.6	83.7
0°-90°	4385.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4385.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1740	1740	1740	1740	1740	
5°	1728	1724	1728	1723	1765	163
15°	1654	1635	1645	1654	1654	461
25°	1479	1487	1511	1531	1528	684
35°	1287	1291	1321	1352	1351	799
45°	1036	1055	1072	1100	1074	801
55°	774	769	789	784	784	689
65°	476	469	488	469	472	473
75°	198	194	198	184	190	212
85°	24	24	24	23	22	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1739.9	1739.9	1739.9	1739.9	1739.9
2.5°	1754.9	1741.7	1729.3	1743.7	1752.4
5°	1727.5	1723.5	1728.2	1723.0	1764.6
7.5°	1692.0	1707.5	1716.5	1710.9	1713.3
10°	1673.1	1667.7	1687.7	1701.7	1699.6
12.5°	1652.9	1661.0	1662.1	1677.2	1678.5
15°	1654.0	1634.9	1645.1	1653.6	1654.3
17.5°	1589.8	1610.5	1617.4	1637.0	1612.7
20°	1581.9	1566.9	1581.9	1601.9	1598.8
22.5°	1533.6	1516.8	1549.1	1566.9	1565.8
25°	1478.8	1486.9	1511.2	1530.9	1527.8
27.5°	1430.7	1440.2	1474.8	1502.0	1484.4
30°	1393.7	1389.0	1418.2	1442.4	1455.9
32.5°	1327.4	1344.5	1378.6	1402.7	1389.9
35°	1287.2	1291.0	1320.9	1351.5	1350.6
37.5°	1216.9	1234.6	1276.6	1285.2	1277.3
40°	1156.9	1174.7	1212.6	1221.8	1218.0
42.5°	1112.7	1115.8	1148.4	1158.9	1142.1
45°	1035.6	1054.9	1072.4	1100.1	1074.0
47.5°	970.0	979.0	1016.7	1024.1	1010.4
50°	910.5	913.6	951.6	942.4	933.4
52.5°	835.7	848.9	870.3	868.5	857.9
55°	774.1	769.0	789.2	783.8	783.6
57.5°	700.2	709.2	725.8	717.3	703.6
60°	631.0	631.2	637.3	627.7	625.9
62.5°	554.0	556.7	558.0	546.1	565.4
65°	475.6	469.3	487.7	469.1	472.2
67.5°	403.5	406.6	404.8	393.1	397.6
70°	330.2	334.3	331.3	318.1	322.1
72.5°	263.3	258.3	261.5	244.9	252.5
75°	197.9	193.9	197.5	183.5	189.8
77.5°	134.8	137.9	135.7	128.3	132.5
80°	89.0	86.5	86.5	82.2	83.1
82.5°	51.9	49.4	48.7	47.4	49.4
85°	24.3	23.6	24.0	23.4	22.5
87.5°	8.8	9.0	9.0	8.5	8.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)