

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: P590541

Luminaire Tested: FSR-24-2-LD4-3LO-35-UNV-93-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590541
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-35-UNV-93-84-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4380.0 lumens
Efficiency: N/A
Efficacy: 124.8 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

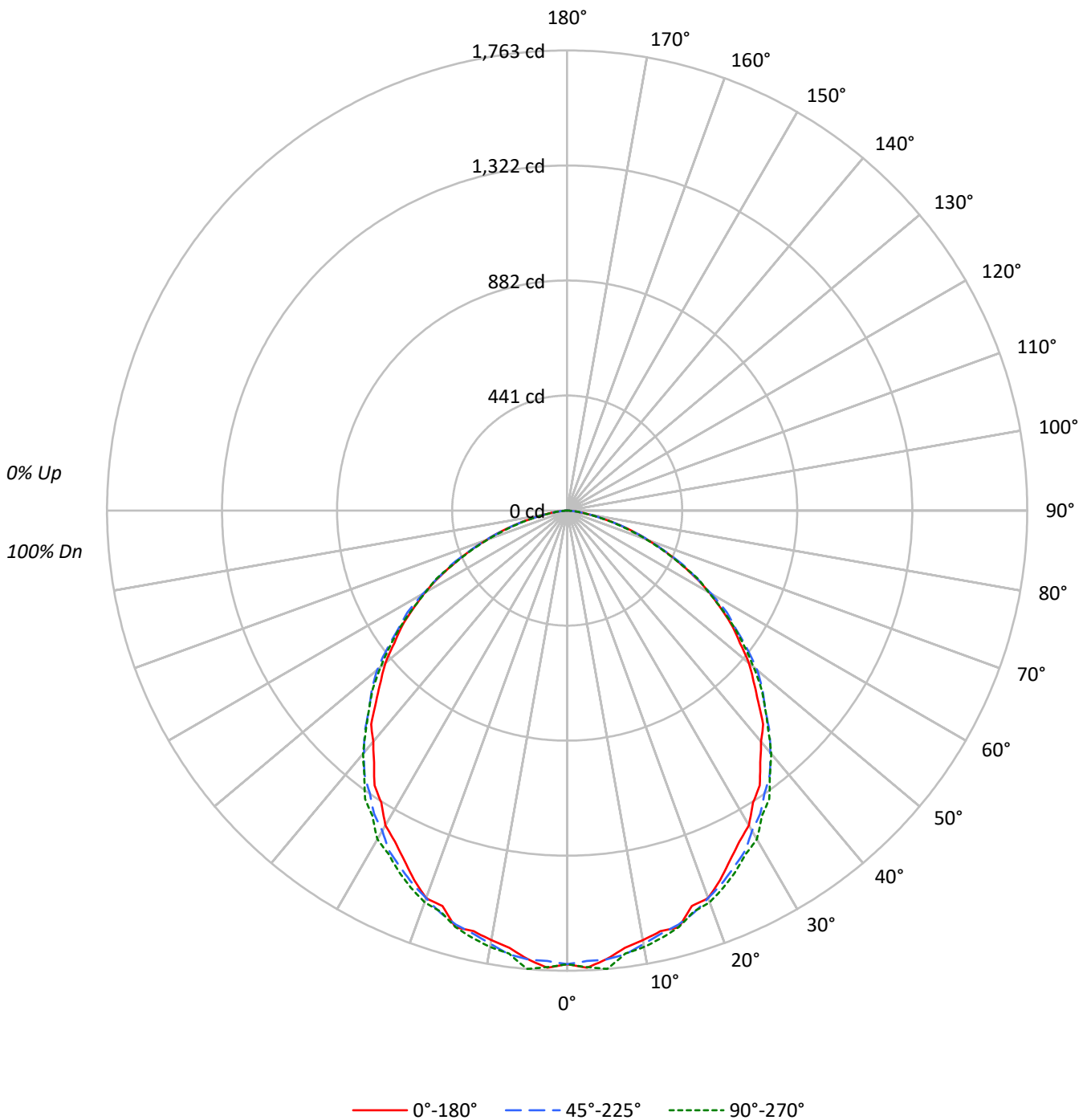
Input Watts (W): 35.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					86			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73					73			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62					62			
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41					41			
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36					36			
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32					32			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29					29			
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26					26			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4677	4677	4677
5°	4661	4663	4761
10°	4567	4606	4639
15°	4603	4578	4603
20°	4525	4525	4573
25°	4386	4482	4531
30°	4326	4402	4519
35°	4224	4334	4432
40°	4059	4255	4274
45°	3937	4077	4083
50°	3807	3979	3903
55°	3628	3698	3672
60°	3392	3426	3364
65°	3025	3102	3004
70°	2595	2604	2532
75°	2056	2050	1971
80°	1378	1339	1286
85°	747	741	692

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4182 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	163.5	3.7
10°-20°	463.3	10.6
20°-30°	694.1	15.8
30°-40°	822.7	18.8
40°-50°	824.2	18.8
50°-60°	699.6	16.0
60°-70°	471.7	10.8
70°-80°	207.2	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°	1320.9	30.2
0°-40°	2143.6	48.9
0°-60°	3667.4	83.7
0°-90°	4380.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4380.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1738	1738	1738	1738	1738	
5°	1726	1722	1726	1721	1763	163
15°	1652	1633	1643	1652	1652	460
25°	1477	1485	1509	1529	1526	683
35°	1286	1290	1319	1350	1349	798
45°	1034	1054	1071	1099	1073	800
55°	773	768	788	783	783	688
65°	475	469	487	468	472	472
75°	198	194	197	183	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°	1737.9	1737.9	1737.9	1737.9	1737.9
2.5°	1752.9	1739.7	1727.3	1741.7	1750.4
5°	1725.5	1721.5	1726.2	1721.0	1762.6
7.5°	1690.1	1705.6	1714.5	1708.9	1711.4
10°	1671.2	1665.8	1685.8	1699.7	1697.7
12.5°	1651.0	1659.1	1660.2	1675.3	1676.6
15°	1652.2	1633.1	1643.2	1651.7	1652.4
17.5°	1588.0	1608.6	1615.6	1635.1	1610.9
20°	1580.1	1565.1	1580.1	1600.1	1597.0
22.5°	1531.9	1515.1	1547.4	1565.1	1564.0
25°	1477.1	1485.2	1509.4	1529.2	1526.1
27.5°	1429.1	1438.5	1473.1	1500.2	1482.7
30°	1392.1	1387.4	1416.6	1440.8	1454.2
32.5°	1325.9	1343.0	1377.1	1401.1	1388.3
35°	1285.7	1289.5	1319.4	1349.9	1349.0
37.5°	1215.5	1233.2	1275.2	1283.7	1275.9
40°	1155.6	1173.3	1211.2	1220.4	1216.6
42.5°	1111.4	1114.5	1147.1	1157.6	1140.8
45°	1034.4	1053.7	1071.2	1098.8	1072.8
47.5°	968.9	977.9	1015.6	1023.0	1009.3
50°	909.4	912.6	950.5	941.3	932.3
52.5°	834.7	848.0	869.3	867.5	856.9
55°	773.2	768.1	788.3	782.9	782.7
57.5°	699.4	708.4	725.0	716.5	702.8
60°	630.3	630.5	636.6	626.9	625.1
62.5°	553.3	556.0	557.4	545.5	564.8
65°	475.0	468.7	487.1	468.5	471.7
67.5°	403.0	406.1	404.3	392.7	397.2
70°	329.8	333.9	331.0	317.7	321.8
72.5°	263.0	258.0	261.2	244.6	252.2
75°	197.7	193.6	197.2	183.3	189.6
77.5°	134.6	137.8	135.5	128.1	132.4
80°	88.9	86.4	86.4	82.1	83.0
82.5°	51.8	49.4	48.7	47.3	49.4
85°	24.2	23.6	24.0	23.3	22.4
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)