

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: P590526

Luminaire Tested: FSR-24-2-LD4-3LO-35-UNV-81-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590526
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-81-85-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

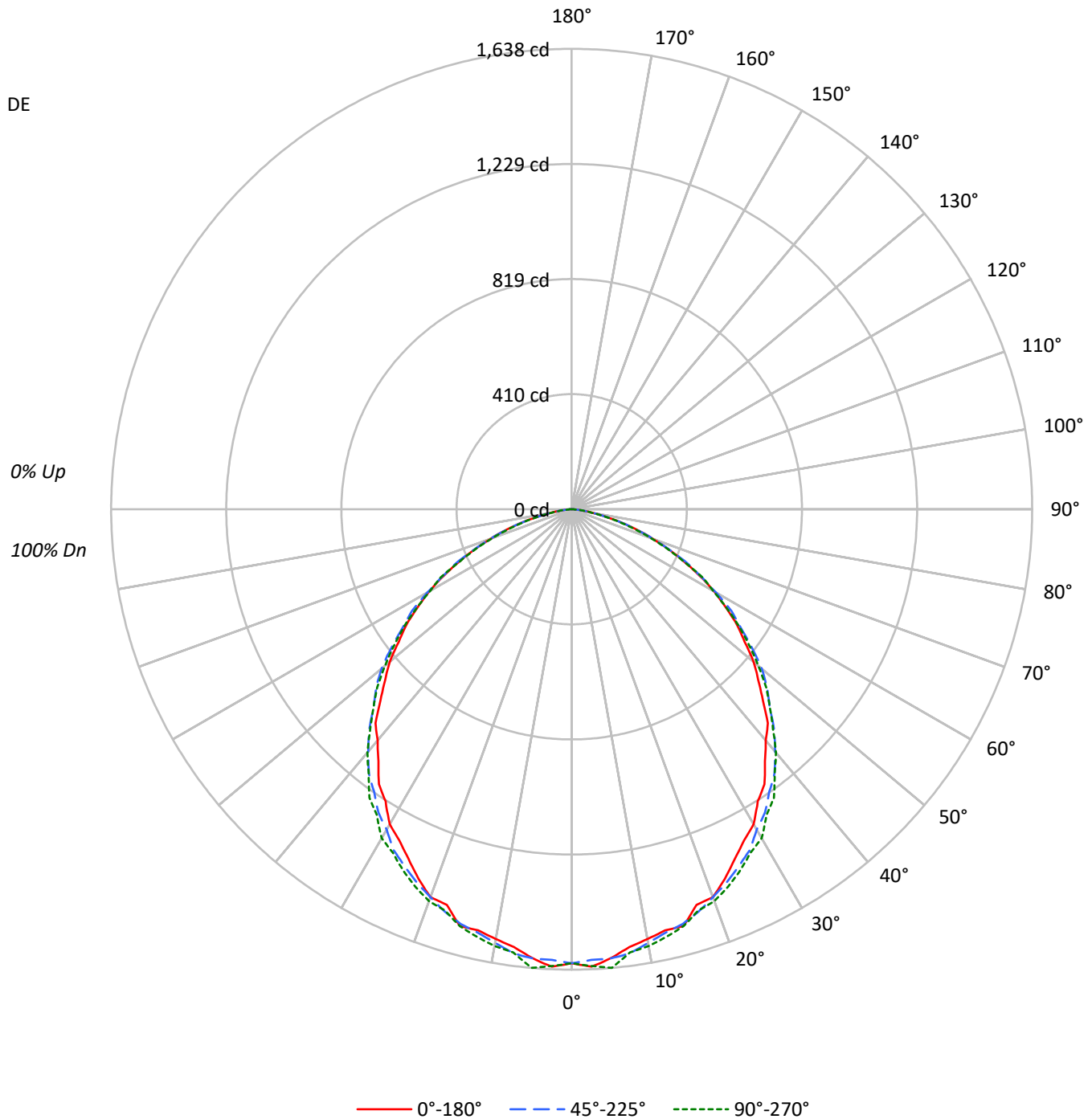
Lumens per Lamp: N/A
Luminaire Lumens: 4070.0 lumens
Efficiency: N/A
Efficacy: 116.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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	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°	4346	4346	4346
5°	4331	4333	4424
10°	4243	4280	4311
15°	4277	4254	4277
20°	4205	4205	4249
25°	4075	4165	4210
30°	4020	4090	4199
35°	3925	4028	4118
40°	3772	3954	3971
45°	3658	3788	3794
50°	3538	3697	3627
55°	3371	3437	3412
60°	3152	3183	3126
65°	2811	2883	2791
70°	2412	2419	2353
75°	1910	1906	1832
80°	1280	1244	1195
85°	695	689	645

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3886 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	151.9	3.7
10°-20°	430.5	10.6
20°-30°	645.0	15.8
30°-40°	764.5	18.8
40°-50°	765.9	18.8
50°-60°	650.1	16.0
60°-70°	438.3	10.8
70°-80°	192.6	4.7
80°-90°	31.3	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°	1227.4	30.2
0°-40°	1991.9	48.9
0°-60°	3407.8	83.7
0°-90°	4070.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4070.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1615	1615	1615	1615	1615	
5°	1603	1600	1604	1599	1638	151
15°	1535	1518	1527	1535	1535	428
25°	1373	1380	1403	1421	1418	635
35°	1195	1198	1226	1254	1254	742
45°	961	979	995	1021	997	744
55°	718	714	732	728	727	639
65°	441	436	453	435	438	439
75°	184	180	183	170	176	197
85°	22	22	22	22	21	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1614.9	1614.9	1614.9	1614.9	1614.9
2.5°	1628.8	1616.5	1605.1	1618.4	1626.5
5°	1603.4	1599.7	1604.0	1599.2	1637.8
7.5°	1570.5	1584.8	1593.2	1588.0	1590.3
10°	1552.9	1547.9	1566.5	1579.4	1577.6
12.5°	1534.2	1541.7	1542.7	1556.7	1558.0
15°	1535.2	1517.5	1526.9	1534.8	1535.4
17.5°	1475.6	1494.8	1501.2	1519.4	1496.9
20°	1468.3	1454.3	1468.3	1486.9	1483.9
22.5°	1423.5	1407.8	1437.9	1454.3	1453.3
25°	1372.6	1380.1	1402.6	1421.0	1418.0
27.5°	1328.0	1336.7	1368.8	1394.1	1377.8
30°	1293.6	1289.2	1316.3	1338.8	1351.3
32.5°	1232.1	1247.9	1279.6	1301.9	1290.0
35°	1194.7	1198.3	1226.0	1254.4	1253.5
37.5°	1129.5	1145.9	1184.9	1192.9	1185.6
40°	1073.8	1090.3	1125.5	1134.1	1130.5
42.5°	1032.7	1035.6	1065.9	1075.7	1060.0
45°	961.2	979.1	995.4	1021.1	996.9
47.5°	900.3	908.7	943.7	950.6	937.9
50°	845.1	848.0	883.2	874.7	866.3
52.5°	775.6	787.9	807.7	806.1	796.3
55°	718.5	713.7	732.5	727.5	727.3
57.5°	649.9	658.3	673.7	665.8	653.0
60°	585.7	585.9	591.5	582.6	580.9
62.5°	514.2	516.7	517.9	506.9	524.8
65°	441.4	435.6	452.7	435.4	438.3
67.5°	374.5	377.4	375.7	364.9	369.1
70°	306.5	310.3	307.5	295.2	299.0
72.5°	244.4	239.8	242.7	227.3	234.4
75°	183.7	179.9	183.3	170.3	176.2
77.5°	125.1	128.0	125.9	119.1	123.0
80°	82.6	80.3	80.3	76.3	77.1
82.5°	48.2	45.9	45.2	44.0	45.9
85°	22.5	21.9	22.3	21.7	20.9
87.5°	8.1	8.3	8.3	7.9	7.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)