

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: P563351

Luminaire Tested: FSR-24-4-LD4-3LO-40-UNV-82-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563351
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-LD4-3LO-40-UNV-82-87-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

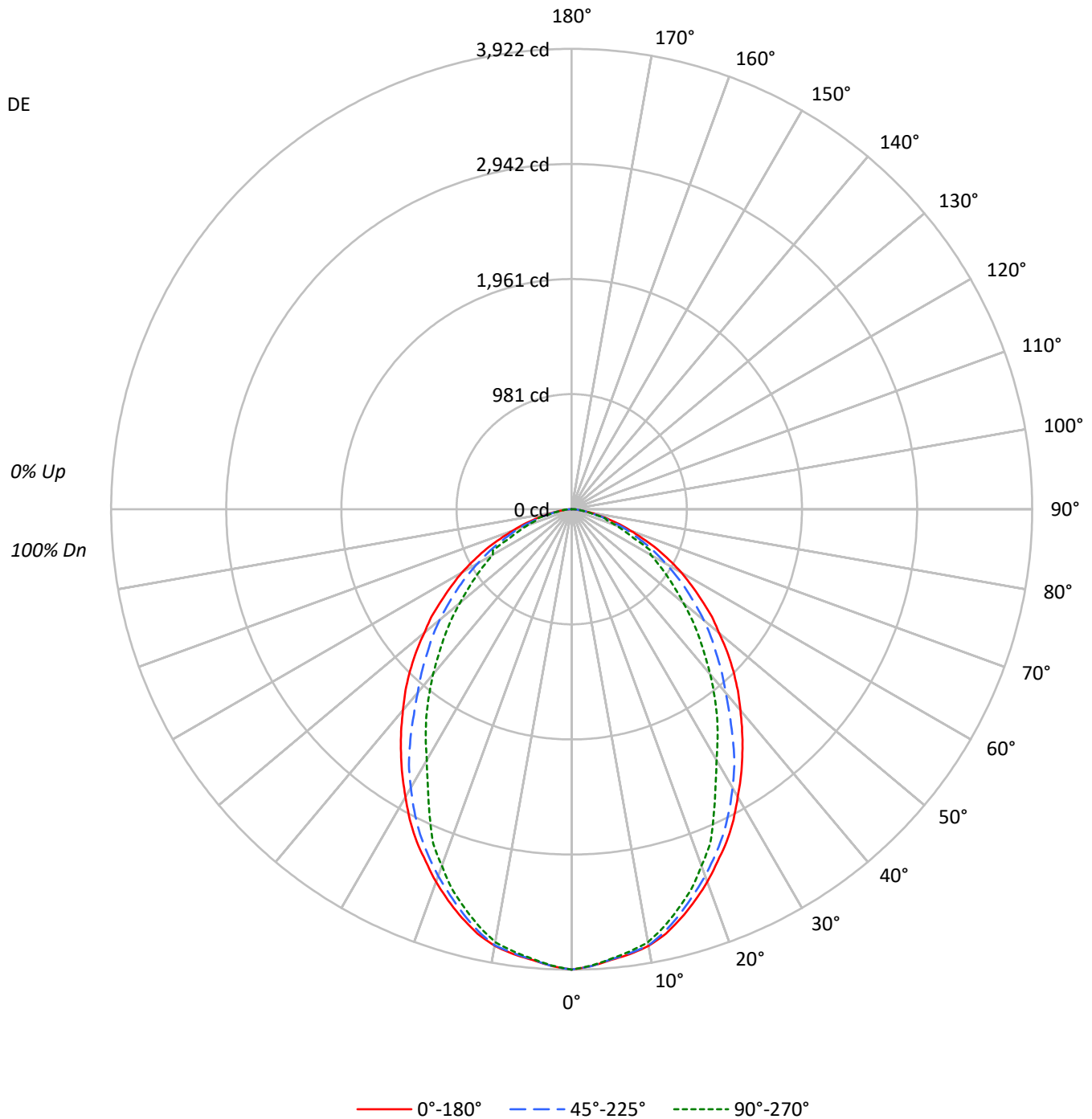
Lumens per Lamp: N/A
Luminaire Lumens: 7699.0 lumens
Efficiency: N/A
Efficacy: 109.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
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



TEST NUMBER: P563351
CATALOG NUMBER: FSR-24-4-LD4-3LO-40-UNV-82-87-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P563351

CATALOG NUMBER: FSR-24-4-LD4-3LO-40-UNV-82-87-EDD

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	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5277	5277	5277
5°	5205	5199	5193
10°	5160	5154	5116
15°	5021	4970	4901
20°	4836	4758	4629
25°	4638	4537	4254
30°	4395	4254	3832
35°	4163	3932	3545
40°	3926	3583	3225
45°	3701	3313	2916
50°	3426	3075	2600
55°	3169	2787	2329
60°	2904	2489	2086
65°	2555	2180	1848
70°	2105	1908	1570
75°	1673	1461	1532
80°	1124	1054	983
85°	699	840	980

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3701 cd/sqm



TEST NUMBER: P563351

CATALOG NUMBER: FSR-24-4-LD4-3LO-40-UNV-82-87-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	365.1	4.7
10°-20°	1001.9	13.0
20°-30°	1387.0	18.0
30°-40°	1479.0	19.2
40°-50°	1349.3	17.5
50°-60°	1057.1	13.7
60°-70°	688.9	8.9
70°-80°	305.2	4.0
80°-90°	65.5	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°	2754.0	35.8
0°-40°	4233.0	55.0
0°-60°	6639.3	86.2
0°-90°	7699.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7699.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3922	3922	3922	3922	3922	
5°	3854	3849	3849	3845	3845	366
15°	3604	3604	3568	3532	3518	1013
25°	3124	3106	3056	2947	2865	1434
35°	2534	2516	2394	2212	2158	1584
45°	1945	1904	1741	1596	1532	1498
55°	1351	1310	1188	1047	993	1212
65°	802	757	685	698	580	791
75°	322	299	281	268	295	345
85°	45	50	54	59	64	63
90°	0	0	0	0	0	



TEST NUMBER: P563351

CATALOG NUMBER: FSR-24-4-LD4-3LO-40-UNV-82-87-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3921.8	3921.8	3921.8	3921.8	3921.8
2.5°	3894.6	3894.6	3894.6	3890.0	3890.0
5°	3853.8	3849.2	3849.2	3844.7	3844.7
7.5°	3822.0	3817.5	3813.0	3808.4	3799.4
10°	3776.7	3776.7	3772.2	3749.5	3744.9
12.5°	3704.1	3699.6	3681.5	3649.7	3640.7
15°	3604.4	3604.4	3568.1	3531.9	3518.3
17.5°	3495.6	3491.1	3445.7	3409.4	3391.3
20°	3377.7	3368.6	3323.3	3264.4	3232.6
22.5°	3246.2	3246.2	3191.8	3114.7	3083.0
25°	3123.8	3105.7	3055.8	2947.0	2865.4
27.5°	2983.3	2956.1	2901.7	2747.5	2652.3
30°	2829.1	2815.5	2738.4	2538.9	2466.4
32.5°	2684.0	2661.4	2579.8	2371.2	2312.3
35°	2534.4	2516.3	2393.9	2212.5	2158.1
37.5°	2384.8	2362.1	2208.0	2062.9	1994.9
40°	2235.2	2208.0	2040.2	1908.7	1836.2
42.5°	2094.6	2058.4	1895.1	1754.6	1673.0
45°	1945.0	1904.2	1741.0	1595.9	1532.4
47.5°	1795.4	1759.1	1609.5	1459.9	1387.4
50°	1636.7	1605.0	1469.0	1319.3	1242.3
52.5°	1505.2	1455.4	1323.9	1174.3	1110.8
55°	1351.1	1310.3	1187.9	1047.3	992.9
57.5°	1210.5	1169.7	1056.4	924.9	879.6
60°	1079.1	1020.1	924.9	811.6	775.3
62.5°	934.0	888.6	807.0	711.8	757.2
65°	802.5	757.2	684.6	698.2	580.3
67.5°	657.4	634.7	571.3	507.8	489.7
70°	535.0	507.8	485.1	417.1	399.0
72.5°	426.2	399.0	367.2	331.0	317.4
75°	321.9	299.2	281.1	267.5	294.7
77.5°	222.2	213.1	199.5	185.9	181.4
80°	145.1	140.5	136.0	131.5	126.9
82.5°	86.1	86.1	86.1	86.1	86.1
85°	45.3	49.9	54.4	58.9	63.5
87.5°	27.2	27.2	31.7	36.3	40.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)