

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: P561328

Luminaire Tested: FSR-12-4-LD4-2HI-35-UNV-80-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561328
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-12-4-LD4-2HI-35-UNV-80-84-EDD-90
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6818.0 lumens
Efficiency: N/A
Efficacy: 78.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

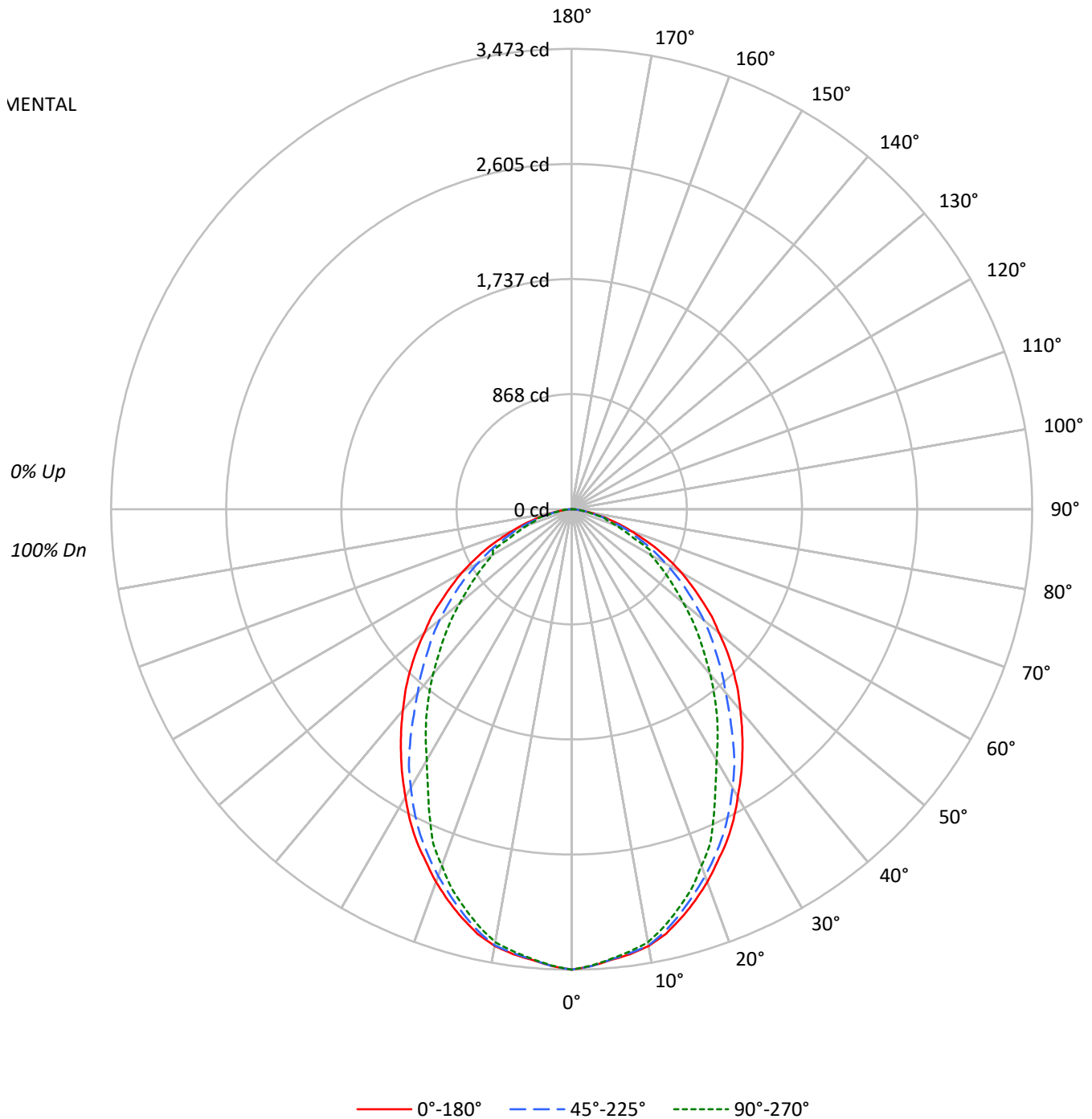
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P561328

CATALOG NUMBER: FSR-12-4-LD4-2HI-35-UNV-80-84-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P561328

CATALOG NUMBER: FSR-12-4-LD4-2HI-35-UNV-80-84-EDD-90

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	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°	9346	9346	9346
5°	9219	9208	9197
10°	9139	9128	9062
15°	8892	8803	8680
20°	8566	8428	8198
25°	8214	8035	7534
30°	7785	7535	6787
35°	7373	6964	6278
40°	6953	6347	5712
45°	6555	5868	5165
50°	6068	5446	4605
55°	5613	4935	4125
60°	5143	4408	3695
65°	4525	3861	3272
70°	3728	3380	2780
75°	2964	2588	2714
80°	1991	1867	1742
85°	1241	1488	1735

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6555 cd/sqm



TEST NUMBER: P561328

CATALOG NUMBER: FSR-12-4-LD4-2HI-35-UNV-80-84-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	323.3	4.7
10°-20°	887.2	13.0
20°-30°	1228.3	18.0
30°-40°	1309.7	19.2
40°-50°	1194.9	17.5
50°-60°	936.1	13.7
60°-70°	610.1	8.9
70°-80°	270.3	4.0
80°-90°	58.0	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°	2438.9	35.8
0°-40°	3748.6	55.0
0°-60°	5879.6	86.2
0°-90°	6818.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6818.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3473	3473	3473	3473	3473	
5°	3413	3409	3409	3405	3405	324
15°	3192	3192	3160	3128	3116	897
25°	2766	2750	2706	2610	2538	1270
35°	2244	2228	2120	1959	1911	1403
45°	1722	1686	1542	1413	1357	1327
55°	1196	1160	1052	928	879	1073
65°	711	670	606	618	514	700
75°	285	265	249	237	261	306
85°	40	44	48	52	56	56
90°	0	0	0	0	0	



TEST NUMBER: P561328

CATALOG NUMBER: FSR-12-4-LD4-2HI-35-UNV-80-84-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3473.0	3473.0	3473.0	3473.0	3473.0
2.5°	3448.9	3448.9	3448.9	3444.9	3444.9
5°	3412.8	3408.8	3408.8	3404.7	3404.7
7.5°	3384.7	3380.7	3376.6	3372.6	3364.6
10°	3344.5	3344.5	3340.5	3320.4	3316.4
12.5°	3280.3	3276.3	3260.2	3232.1	3224.1
15°	3191.9	3191.9	3159.8	3127.7	3115.7
17.5°	3095.6	3091.6	3051.4	3019.3	3003.2
20°	2991.2	2983.2	2943.0	2890.8	2862.7
22.5°	2874.8	2874.8	2826.6	2758.3	2730.2
25°	2766.4	2750.3	2706.1	2609.8	2537.5
27.5°	2641.9	2617.8	2569.6	2433.1	2348.8
30°	2505.4	2493.3	2425.1	2248.4	2184.2
32.5°	2376.9	2356.8	2284.6	2099.9	2047.7
35°	2244.4	2228.3	2119.9	1959.3	1911.2
37.5°	2111.9	2091.8	1955.3	1826.8	1766.6
40°	1979.4	1955.3	1806.8	1690.3	1626.1
42.5°	1854.9	1822.8	1678.3	1553.8	1481.5
45°	1722.4	1686.3	1541.8	1413.3	1357.1
47.5°	1590.0	1557.8	1425.3	1292.8	1228.6
50°	1449.4	1421.3	1300.9	1168.4	1100.1
52.5°	1333.0	1288.8	1172.4	1039.9	983.7
55°	1196.5	1160.3	1051.9	927.5	879.3
57.5°	1072.0	1035.9	935.5	819.1	778.9
60°	955.6	903.4	819.1	718.7	686.6
62.5°	827.1	786.9	714.7	630.4	670.5
65°	710.7	670.5	606.3	618.3	513.9
67.5°	582.2	562.1	505.9	449.7	433.6
70°	473.8	449.7	429.6	369.4	353.3
72.5°	377.4	353.3	325.2	293.1	281.1
75°	285.1	265.0	248.9	236.9	261.0
77.5°	196.7	188.7	176.7	164.6	160.6
80°	128.5	124.5	120.5	116.4	112.4
82.5°	76.3	76.3	76.3	76.3	76.3
85°	40.2	44.2	48.2	52.2	56.2
87.5°	24.1	24.1	28.1	32.1	36.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)