

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: P561337

Luminaire Tested: FSR-12-4-LD4-2HI-35-UNV-80-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561337
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-80-88-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6880.0 lumens
Efficiency: N/A
Efficacy: 79.6 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

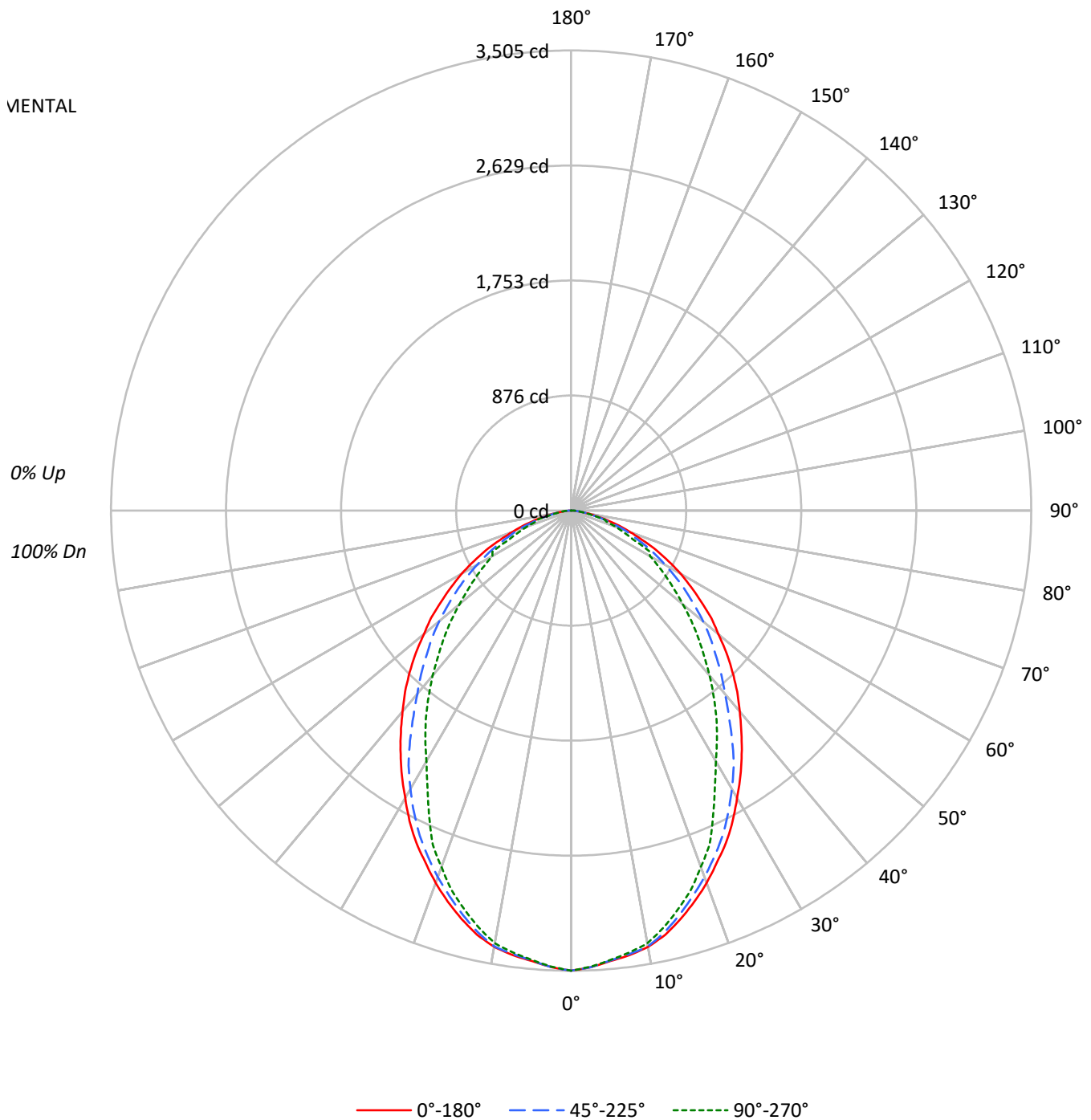
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9431	9431	9431
5°	9303	9292	9281
10°	9222	9211	9145
15°	8973	8883	8759
20°	8644	8505	8272
25°	8288	8108	7603
30°	7856	7604	6848
35°	7440	7027	6335
40°	7017	6405	5764
45°	6615	5921	5211
50°	6123	5496	4647
55°	5665	4980	4163
60°	5190	4448	3729
65°	4566	3896	3302
70°	3762	3411	2805
75°	2991	2612	2738
80°	2008	1883	1757
85°	1250	1501	1751

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6615 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	326.2	4.7
10°-20°	895.3	13.0
20°-30°	1239.5	18.0
30°-40°	1321.7	19.2
40°-50°	1205.7	17.5
50°-60°	944.6	13.7
60°-70°	615.6	8.9
70°-80°	272.8	4.0
80°-90°	58.6	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°	2461.0	35.8
0°-40°	3782.7	55.0
0°-60°	5933.0	86.2
0°-90°	6880.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6880.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3505	3505	3505	3505	3505	
5°	3444	3440	3440	3436	3436	327
15°	3221	3221	3189	3156	3144	906
25°	2792	2775	2731	2634	2561	1282
35°	2265	2249	2139	1977	1928	1416
45°	1738	1702	1556	1426	1369	1339
55°	1207	1171	1062	936	887	1083
65°	717	677	612	624	519	707
75°	288	267	251	239	263	308
85°	40	45	49	53	57	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3504.6	3504.6	3504.6	3504.6	3504.6
2.5°	3480.3	3480.3	3480.3	3476.2	3476.2
5°	3443.8	3439.8	3439.8	3435.7	3435.7
7.5°	3415.4	3411.4	3407.3	3403.3	3395.2
10°	3374.9	3374.9	3370.9	3350.6	3346.6
12.5°	3310.1	3306.1	3289.8	3261.5	3253.4
15°	3221.0	3221.0	3188.6	3156.1	3144.0
17.5°	3123.7	3119.7	3079.2	3046.8	3030.6
20°	3018.4	3010.3	2969.8	2917.1	2888.7
22.5°	2900.9	2900.9	2852.3	2783.4	2755.0
25°	2791.5	2775.3	2730.7	2633.5	2560.6
27.5°	2665.9	2641.6	2593.0	2455.2	2370.1
30°	2528.2	2516.0	2447.1	2268.9	2204.0
32.5°	2398.5	2378.3	2305.3	2119.0	2066.3
35°	2264.8	2248.6	2139.2	1977.2	1928.5
37.5°	2131.1	2110.9	1973.1	1843.4	1782.7
40°	1997.4	1973.1	1823.2	1705.7	1640.9
42.5°	1871.8	1839.4	1693.5	1567.9	1495.0
45°	1738.1	1701.6	1555.8	1426.1	1369.4
47.5°	1604.4	1572.0	1438.3	1304.6	1239.8
50°	1462.6	1434.2	1312.7	1179.0	1110.1
52.5°	1345.1	1300.5	1183.0	1049.3	992.6
55°	1207.4	1170.9	1061.5	935.9	887.3
57.5°	1081.8	1045.3	944.0	826.5	786.0
60°	964.3	911.6	826.5	725.2	692.8
62.5°	834.6	794.1	721.2	636.1	676.6
65°	717.1	676.6	611.8	623.9	518.6
67.5°	587.5	567.2	510.5	453.8	437.6
70°	478.1	453.8	433.5	372.7	356.5
72.5°	380.8	356.5	328.2	295.8	283.6
75°	287.7	267.4	251.2	239.0	263.3
77.5°	198.5	190.4	178.3	166.1	162.1
80°	129.6	125.6	121.5	117.5	113.4
82.5°	77.0	77.0	77.0	77.0	77.0
85°	40.5	44.6	48.6	52.7	56.7
87.5°	24.3	24.3	28.4	32.4	36.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)