

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: P561435

Luminaire Tested: FSR-12-4-LD4-2HI-40-UNV-82-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561435
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-40-UNV-82-94-EDD
Description: 1X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7671.0 lumens
Efficiency: N/A
Efficacy: 88.8 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

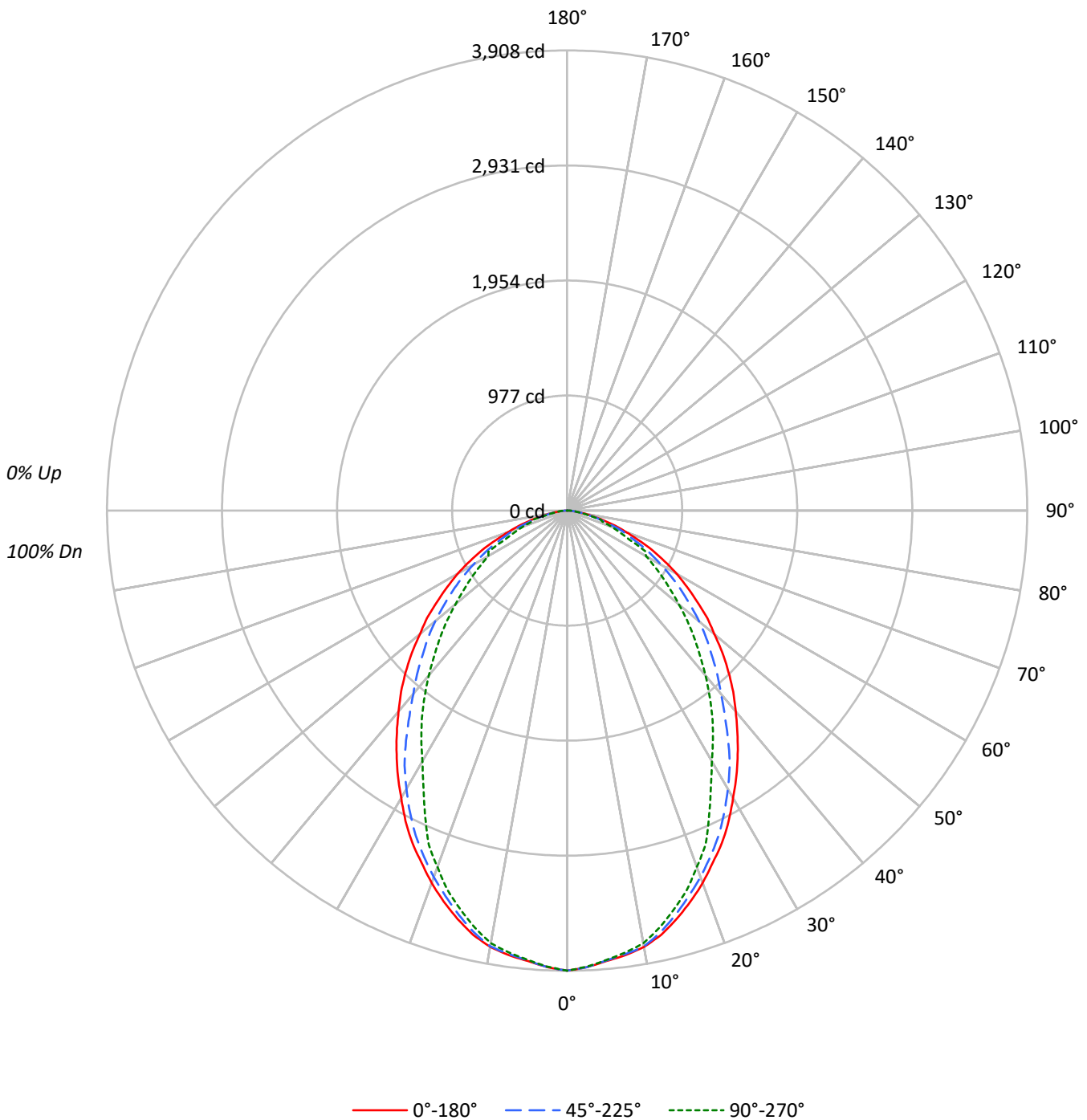
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	10515	10515	10515
5°	10372	10360	10348
10°	10282	10270	10196
15°	10005	9904	9766
20°	9637	9482	9224
25°	9242	9040	8477
30°	8759	8478	7636
35°	8295	7836	7064
40°	7823	7141	6427
45°	7375	6602	5811
50°	6827	6127	5182
55°	6316	5552	4641
60°	5786	4959	4158
65°	5091	4343	3682
70°	4194	3803	3127
75°	3334	2912	3053
80°	2241	2100	1960
85°	1396	1673	1951

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7375 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	363.7	4.7
10°-20°	998.2	13.0
20°-30°	1382.0	18.0
30°-40°	1473.6	19.2
40°-50°	1344.4	17.5
50°-60°	1053.2	13.7
60°-70°	686.4	8.9
70°-80°	304.1	4.0
80°-90°	65.3	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°	2744.0	35.8
0°-40°	4217.6	55.0
0°-60°	6615.2	86.2
0°-90°	7671.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7671.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3908	3908	3908	3908	3908	
5°	3840	3835	3835	3831	3831	364
15°	3591	3591	3555	3519	3506	1010
25°	3112	3094	3045	2936	2855	1429
35°	2525	2507	2385	2204	2150	1579
45°	1938	1897	1735	1590	1527	1493
55°	1346	1306	1184	1044	989	1207
65°	800	754	682	696	578	788
75°	321	298	280	266	294	344
85°	45	50	54	59	63	63
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3907.5	3907.5	3907.5	3907.5	3907.5
2.5°	3880.4	3880.4	3880.4	3875.9	3875.9
5°	3839.7	3835.2	3835.2	3830.7	3830.7
7.5°	3808.1	3803.6	3799.1	3794.6	3785.5
10°	3762.9	3762.9	3758.4	3735.8	3731.3
12.5°	3690.7	3686.2	3668.1	3636.5	3627.4
15°	3591.3	3591.3	3555.2	3519.0	3505.5
17.5°	3482.9	3478.4	3433.2	3397.0	3379.0
20°	3365.4	3356.4	3311.2	3252.5	3220.9
22.5°	3234.4	3234.4	3180.2	3103.4	3071.8
25°	3112.5	3094.4	3044.7	2936.3	2855.0
27.5°	2972.4	2945.3	2891.1	2737.5	2642.6
30°	2818.8	2805.3	2728.5	2529.7	2457.4
32.5°	2674.3	2651.7	2570.4	2362.6	2303.8
35°	2525.2	2507.1	2385.2	2204.5	2150.3
37.5°	2376.1	2353.5	2199.9	2055.4	1987.6
40°	2227.1	2199.9	2032.8	1901.8	1829.5
42.5°	2087.0	2050.9	1888.3	1748.2	1666.9
45°	1937.9	1897.3	1734.7	1590.1	1526.9
47.5°	1788.9	1752.7	1603.7	1454.6	1382.3
50°	1630.8	1599.1	1463.6	1314.5	1237.8
52.5°	1499.8	1450.1	1319.1	1170.0	1106.7
55°	1346.2	1305.5	1183.5	1043.5	989.3
57.5°	1206.1	1165.5	1052.5	921.5	876.4
60°	1075.1	1016.4	921.5	808.6	772.5
62.5°	930.6	885.4	804.1	709.2	754.4
65°	799.6	754.4	682.1	695.7	578.2
67.5°	655.0	632.4	569.2	505.9	487.9
70°	533.0	505.9	483.4	415.6	397.5
72.5°	424.6	397.5	365.9	329.8	316.2
75°	320.7	298.1	280.1	266.5	293.6
77.5°	221.3	212.3	198.8	185.2	180.7
80°	144.6	140.0	135.5	131.0	126.5
82.5°	85.8	85.8	85.8	85.8	85.8
85°	45.2	49.7	54.2	58.7	63.2
87.5°	27.1	27.1	31.6	36.1	40.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)