

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: P561331

Luminaire Tested: FSR-12-4-LD4-2HI-35-UNV-80-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561331
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-80-85-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7986.0 lumens
Efficiency: N/A
Efficacy: 92.4 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

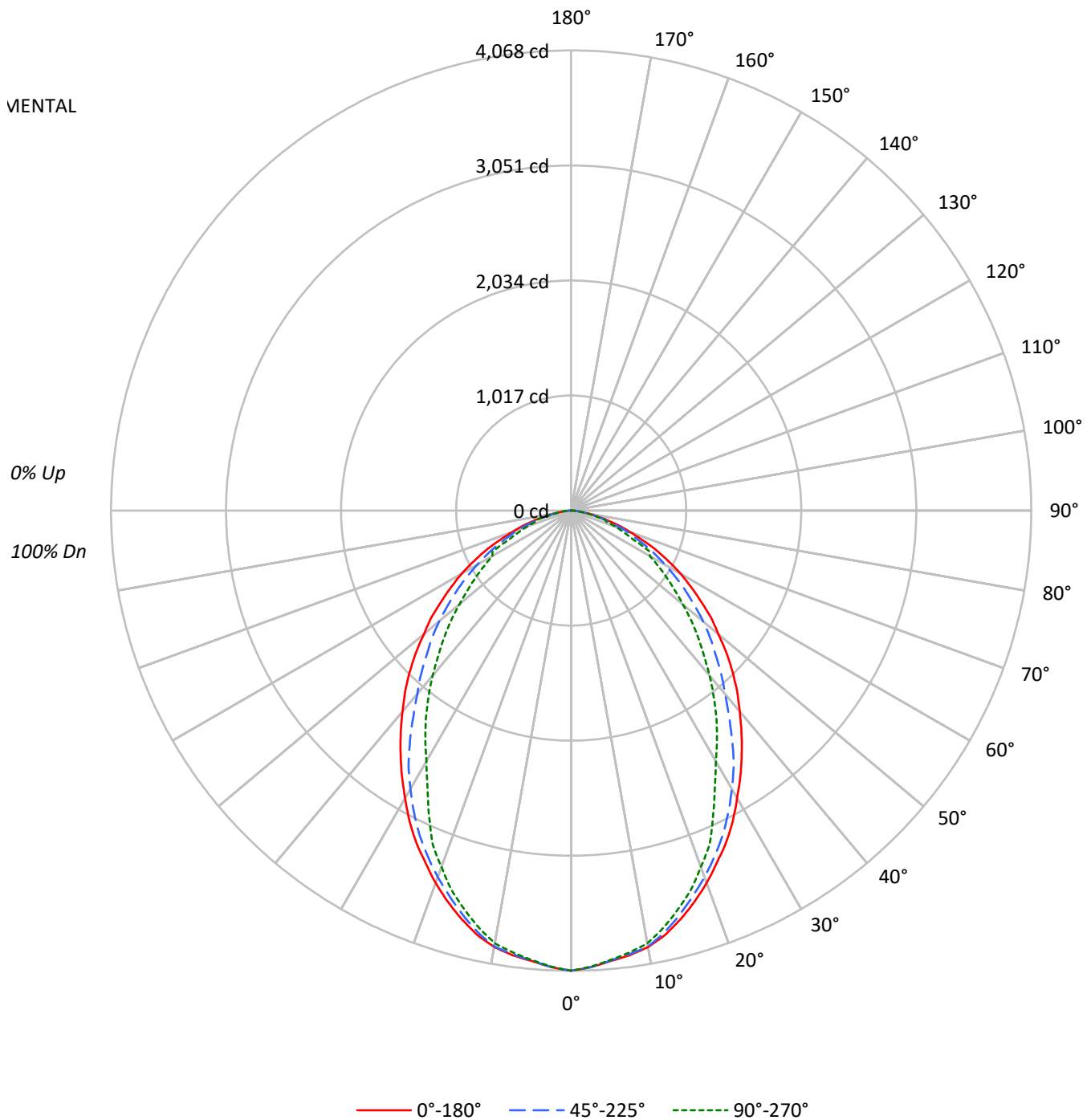
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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				
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°	10947	10947	10947
5°	10798	10785	10773
10°	10705	10692	10615
15°	10416	10311	10167
20°	10033	9872	9602
25°	9621	9411	8825
30°	9119	8826	7949
35°	8636	8157	7354
40°	8144	7434	6691
45°	7678	6873	6049
50°	7107	6379	5395
55°	6575	5780	4832
60°	6024	5163	4328
65°	5300	4521	3833
70°	4366	3959	3257
75°	3472	3032	3178
80°	2332	2187	2041
85°	1451	1741	2032

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7678 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	378.7	4.7
10°-20°	1039.2	13.0
20°-30°	1438.7	18.0
30°-40°	1534.1	19.2
40°-50°	1399.6	17.5
50°-60°	1096.4	13.7
60°-70°	714.6	8.9
70°-80°	316.6	4.0
80°-90°	68.0	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°	2856.7	35.8
0°-40°	4390.8	55.0
0°-60°	6886.8	86.2
0°-90°	7986.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7986.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4068	4068	4068	4068	4068	
5°	3997	3993	3993	3988	3988	379
15°	3739	3739	3701	3664	3649	1051
25°	3240	3221	3170	3057	2972	1488
35°	2629	2610	2483	2295	2239	1644
45°	2018	1975	1806	1655	1590	1554
55°	1401	1359	1232	1086	1030	1257
65°	832	785	710	724	602	820
75°	334	310	292	278	306	358
85°	47	52	56	61	66	65
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4068.0	4068.0	4068.0	4068.0	4068.0
2.5°	4039.7	4039.7	4039.7	4035.0	4035.0
5°	3997.4	3992.7	3992.7	3988.0	3988.0
7.5°	3964.5	3959.8	3955.1	3950.4	3941.0
10°	3917.5	3917.5	3912.8	3889.3	3884.6
12.5°	3842.2	3837.5	3818.7	3785.8	3776.4
15°	3738.8	3738.8	3701.1	3663.5	3649.4
17.5°	3625.9	3621.2	3574.2	3536.5	3517.7
20°	3503.6	3494.2	3447.2	3386.0	3353.1
22.5°	3367.2	3367.2	3310.8	3230.9	3197.9
25°	3240.3	3221.4	3169.7	3056.8	2972.2
27.5°	3094.5	3066.3	3009.8	2849.9	2751.2
30°	2934.6	2920.5	2840.5	2633.6	2558.3
32.5°	2784.1	2760.6	2675.9	2459.6	2398.5
35°	2628.9	2610.1	2483.1	2295.0	2238.6
37.5°	2473.7	2450.2	2290.3	2139.8	2069.3
40°	2318.5	2290.3	2116.3	1979.9	1904.7
42.5°	2172.7	2135.1	1965.8	1820.0	1735.4
45°	2017.5	1975.2	1805.9	1655.4	1589.6
47.5°	1862.3	1824.7	1669.5	1514.3	1439.1
50°	1697.7	1664.8	1523.7	1368.5	1288.6
52.5°	1561.3	1509.6	1373.2	1218.0	1152.2
55°	1401.4	1359.1	1232.1	1086.4	1029.9
57.5°	1255.7	1213.3	1095.8	959.4	912.4
60°	1119.3	1058.1	959.4	841.8	804.2
62.5°	968.8	921.8	837.1	738.3	785.4
65°	832.4	785.4	710.1	724.2	602.0
67.5°	681.9	658.4	592.6	526.7	507.9
70°	554.9	526.7	503.2	432.7	413.9
72.5°	442.1	413.9	380.9	343.3	329.2
75°	333.9	310.4	291.6	277.5	305.7
77.5°	230.4	221.0	206.9	192.8	188.1
80°	150.5	145.8	141.1	136.4	131.7
82.5°	89.4	89.4	89.4	89.4	89.4
85°	47.0	51.7	56.4	61.1	65.8
87.5°	28.2	28.2	32.9	37.6	42.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)