

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: P560952

Luminaire Tested: FSR-12-4-LD4-1LO-35-UNV-80-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560952
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-LD4-1LO-35-UNV-80-88-EDD-90
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1752.0 lumens
Efficiency: N/A
Efficacy: 74.9 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

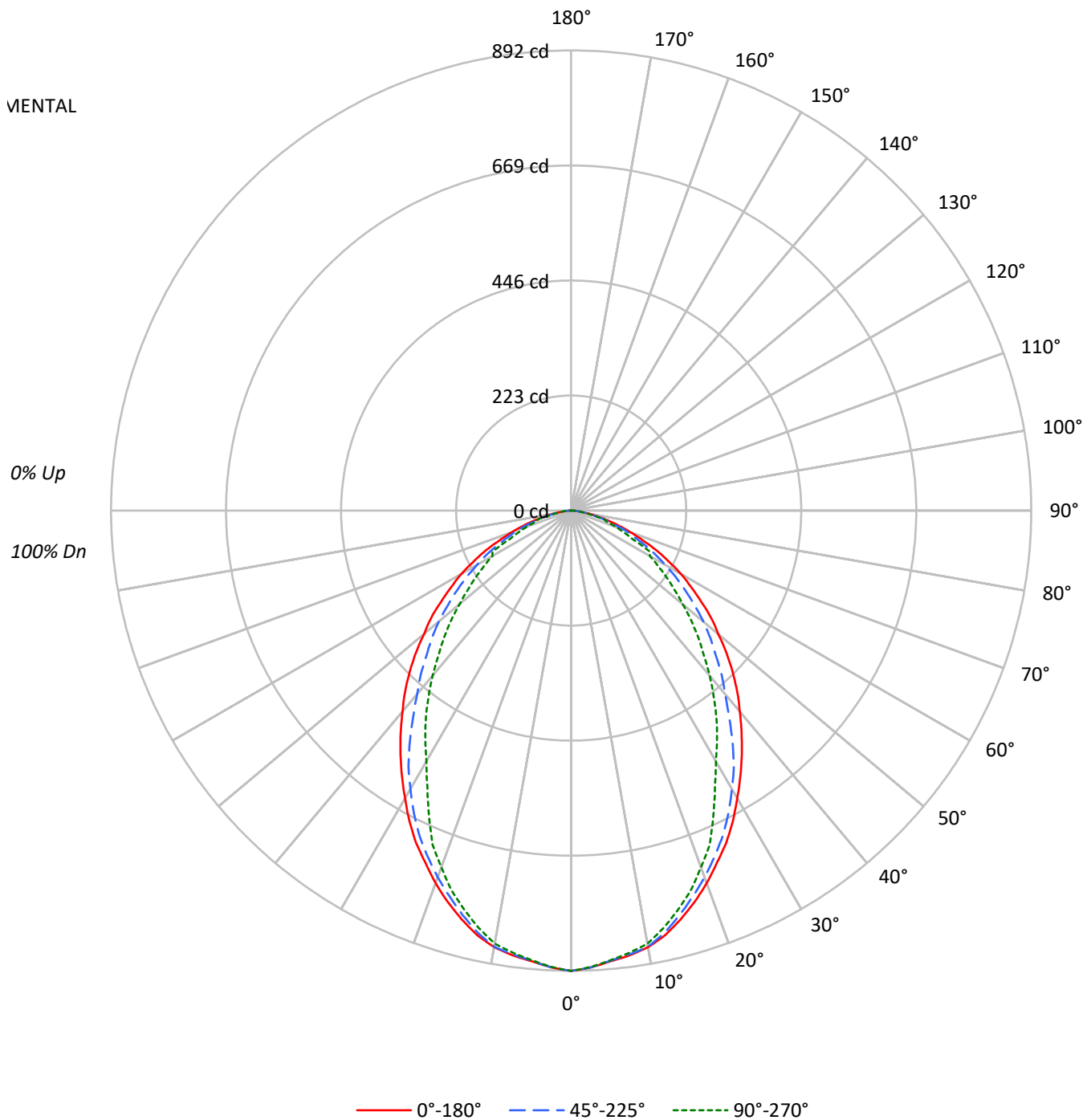
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					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°	2401	2401	2401
5°	2369	2366	2363
10°	2348	2346	2329
15°	2285	2262	2230
20°	2201	2166	2107
25°	2111	2065	1936
30°	2000	1936	1744
35°	1895	1790	1613
40°	1787	1631	1468
45°	1684	1508	1327
50°	1559	1400	1184
55°	1443	1268	1060
60°	1322	1133	949
65°	1163	992	841
70°	958	869	714
75°	762	665	698
80°	511	480	448
85°	318	383	445

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1684 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.1	4.7
10°-20°	228.0	13.0
20°-30°	315.6	18.0
30°-40°	336.6	19.2
40°-50°	307.0	17.5
50°-60°	240.5	13.7
60°-70°	156.8	8.9
70°-80°	69.5	4.0
80°-90°	14.9	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°	626.7	35.8
0°-40°	963.3	55.0
0°-60°	1510.9	86.2
0°-90°	1752.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1752.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	892	892	892	892	892	
5°	877	876	876	875	875	83
15°	820	820	812	804	801	231
25°	711	707	695	671	652	326
35°	577	573	545	504	491	361
45°	443	433	396	363	349	341
55°	308	298	270	238	226	276
65°	183	172	156	159	132	180
75°	73	68	64	61	67	79
85°	10	11	12	13	14	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	892.4	892.4	892.4	892.4	892.4
2.5°	886.3	886.3	886.3	885.2	885.2
5°	877.0	875.9	875.9	874.9	874.9
7.5°	869.7	868.7	867.7	866.7	864.6
10°	859.4	859.4	858.4	853.2	852.2
12.5°	842.9	841.9	837.8	830.5	828.5
15°	820.2	820.2	812.0	803.7	800.6
17.5°	795.5	794.4	784.1	775.9	771.7
20°	768.6	766.6	756.3	742.8	735.6
22.5°	738.7	738.7	726.3	708.8	701.6
25°	710.9	706.7	695.4	670.6	652.1
27.5°	678.9	672.7	660.3	625.2	603.6
30°	643.8	640.7	623.2	577.8	561.3
32.5°	610.8	605.6	587.1	539.6	526.2
35°	576.7	572.6	544.8	503.5	491.1
37.5°	542.7	537.5	502.5	469.4	454.0
40°	508.6	502.5	464.3	434.4	417.9
42.5°	476.7	468.4	431.3	399.3	380.7
45°	442.6	433.3	396.2	363.2	348.7
47.5°	408.6	400.3	366.3	332.2	315.7
50°	372.5	365.2	334.3	300.2	282.7
52.5°	342.5	331.2	301.3	267.2	252.8
55°	307.5	298.2	270.3	238.3	225.9
57.5°	275.5	266.2	240.4	210.5	200.2
60°	245.6	232.1	210.5	184.7	176.4
62.5°	212.5	202.2	183.6	162.0	172.3
65°	182.6	172.3	155.8	158.9	132.1
67.5°	149.6	144.4	130.0	115.6	111.4
70°	121.7	115.6	110.4	94.9	90.8
72.5°	97.0	90.8	83.6	75.3	72.2
75°	73.3	68.1	64.0	60.9	67.1
77.5°	50.6	48.5	45.4	42.3	41.3
80°	33.0	32.0	31.0	29.9	28.9
82.5°	19.6	19.6	19.6	19.6	19.6
85°	10.3	11.3	12.4	13.4	14.4
87.5°	6.2	6.2	7.2	8.3	9.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)