

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: P560953

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

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560953
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
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

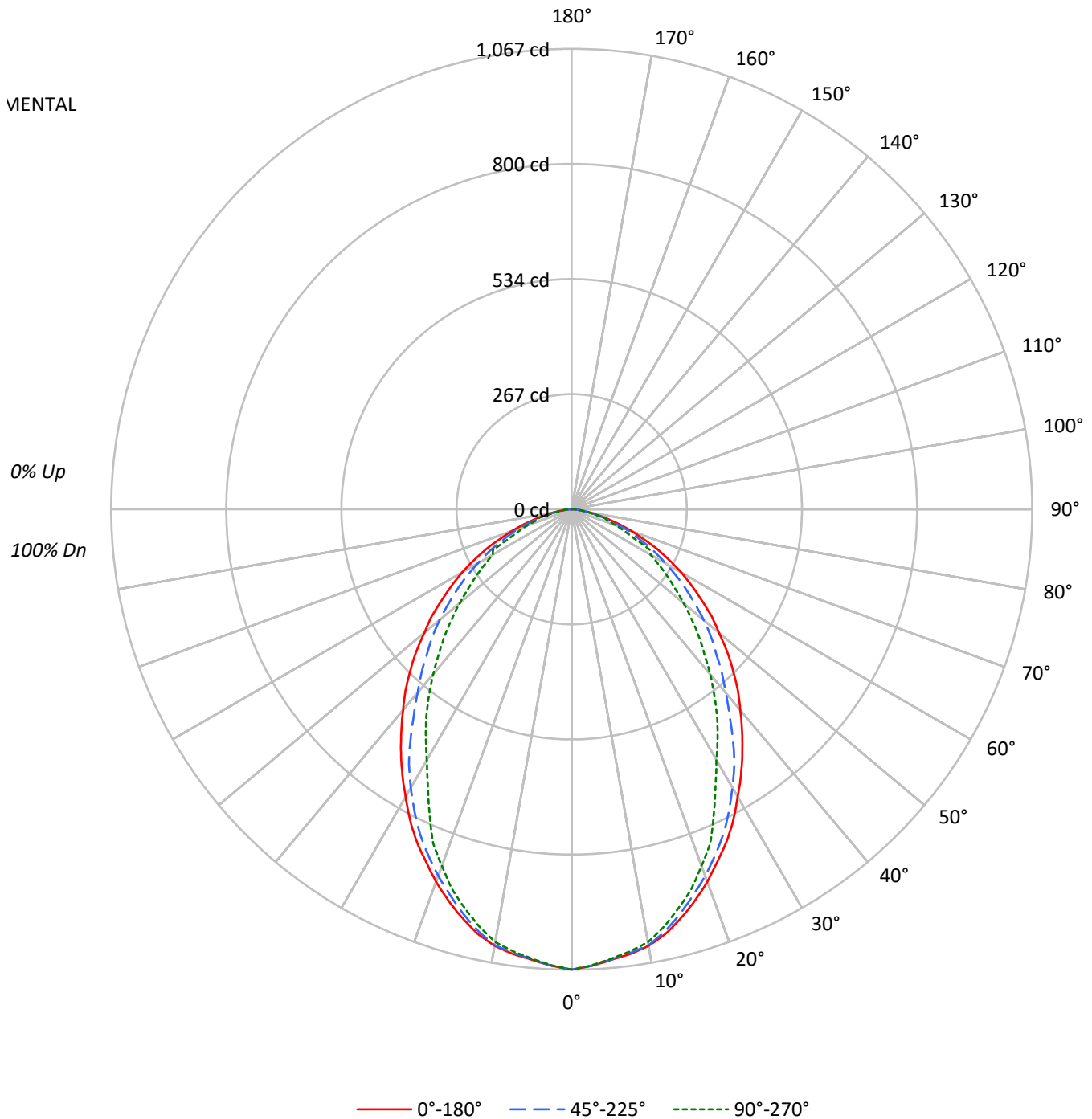
Lumens per Lamp: N/A
Luminaire Lumens: 2094.0 lumens
Efficiency: N/A
Efficacy: 89.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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



TEST NUMBER: P560953
CATALOG NUMBER: FSR-12-4-LD4-1LO-35-UNV-80-88-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P560953

CATALOG NUMBER: FSR-12-4-LD4-1LO-35-UNV-80-88-EDD

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°	2870	2870	2870
5°	2831	2828	2825
10°	2807	2804	2783
15°	2731	2704	2666
20°	2631	2588	2518
25°	2523	2468	2314
30°	2391	2314	2084
35°	2264	2139	1928
40°	2135	1949	1754
45°	2013	1802	1586
50°	1864	1672	1415
55°	1724	1516	1267
60°	1580	1354	1135
65°	1390	1186	1005
70°	1145	1038	854
75°	911	795	834
80°	612	573	535
85°	380	457	534

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2013 cd/sqm



TEST NUMBER: P560953

CATALOG NUMBER: FSR-12-4-LD4-1LO-35-UNV-80-88-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.3	4.7
10°-20°	272.5	13.0
20°-30°	377.3	18.0
30°-40°	402.3	19.2
40°-50°	367.0	17.5
50°-60°	287.5	13.7
60°-70°	187.4	8.9
70°-80°	83.0	4.0
80°-90°	17.8	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°	749.0	35.8
0°-40°	1151.3	55.0
0°-60°	1805.8	86.2
0°-90°	2094.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2094.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1067	1067	1067	1067	1067	
5°	1048	1047	1047	1046	1046	99
15°	980	980	970	961	957	276
25°	850	845	831	802	779	390
35°	689	684	651	602	587	431
45°	529	518	474	434	417	407
55°	368	356	323	285	270	330
65°	218	206	186	190	158	215
75°	88	81	76	73	80	94
85°	12	14	15	16	17	17
90°	0	0	0	0	0	



TEST NUMBER: P560953

CATALOG NUMBER: FSR-12-4-LD4-1LO-35-UNV-80-88-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1066.7	1066.7	1066.7	1066.7	1066.7
2.5°	1059.3	1059.3	1059.3	1058.0	1058.0
5°	1048.2	1046.9	1046.9	1045.7	1045.7
7.5°	1039.5	1038.3	1037.1	1035.8	1033.4
10°	1027.2	1027.2	1026.0	1019.8	1018.6
12.5°	1007.5	1006.2	1001.3	992.7	990.2
15°	980.3	980.3	970.5	960.6	956.9
17.5°	950.7	949.5	937.2	927.3	922.4
20°	918.7	916.2	903.9	887.9	879.2
22.5°	882.9	882.9	868.1	847.2	838.5
25°	849.6	844.7	831.1	801.5	779.3
27.5°	811.4	804.0	789.2	747.3	721.4
30°	769.5	765.8	744.8	690.6	670.8
32.5°	730.0	723.8	701.6	644.9	628.9
35°	689.3	684.4	651.1	601.8	587.0
37.5°	648.6	642.5	600.5	561.1	542.6
40°	607.9	600.5	554.9	519.1	499.4
42.5°	569.7	559.8	515.4	477.2	455.0
45°	529.0	517.9	473.5	434.1	416.8
47.5°	488.3	478.5	437.8	397.1	377.3
50°	445.2	436.5	399.5	358.8	337.9
52.5°	409.4	395.8	360.1	319.4	302.1
55°	367.5	356.4	323.1	284.9	270.1
57.5°	329.2	318.1	287.3	251.6	239.2
60°	293.5	277.5	251.6	220.7	210.9
62.5°	254.0	241.7	219.5	193.6	205.9
65°	218.3	205.9	186.2	189.9	157.8
67.5°	178.8	172.6	155.4	138.1	133.2
70°	145.5	138.1	131.9	113.4	108.5
72.5°	115.9	108.5	99.9	90.0	86.3
75°	87.6	81.4	76.5	72.8	80.2
77.5°	60.4	58.0	54.3	50.6	49.3
80°	39.5	38.2	37.0	35.8	34.5
82.5°	23.4	23.4	23.4	23.4	23.4
85°	12.3	13.6	14.8	16.0	17.3
87.5°	7.4	7.4	8.6	9.9	11.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)