

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: P561273

Luminaire Tested: FSR-12-4-LD4-1STD-50-UNV-80-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561273
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-LD4-1STD-50-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2881.0 lumens
Efficiency: N/A
Efficacy: 86.5 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

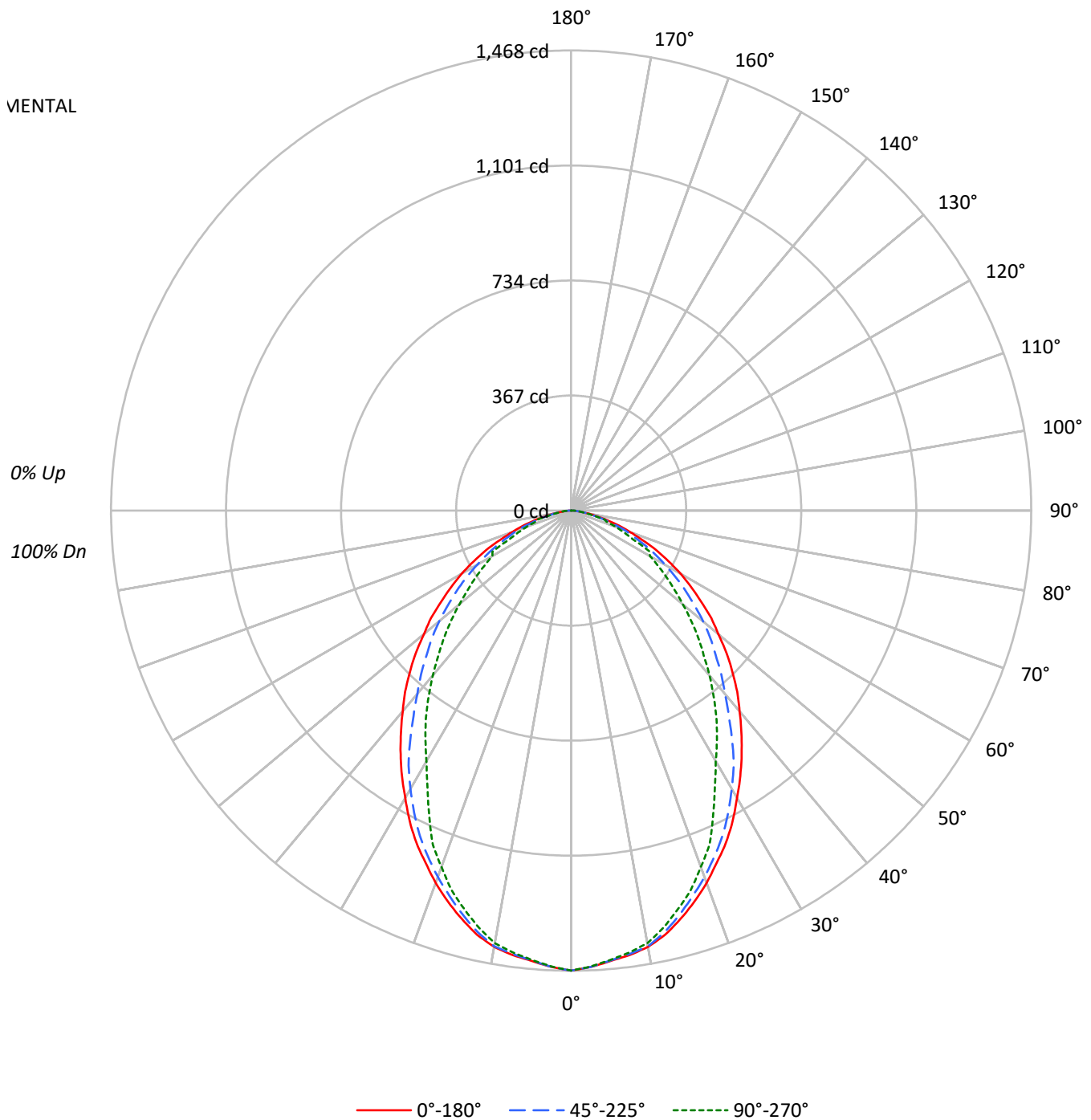
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3949	3949	3949
5°	3895	3891	3886
10°	3862	3857	3829
15°	3758	3720	3668
20°	3620	3561	3464
25°	3471	3395	3184
30°	3290	3184	2868
35°	3116	2943	2653
40°	2938	2682	2414
45°	2770	2479	2182
50°	2564	2301	1946
55°	2372	2085	1743
60°	2173	1863	1561
65°	1912	1631	1383
70°	1575	1428	1175
75°	1253	1094	1147
80°	841	789	736
85°	525	630	735

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2770 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.6	4.7
10°-20°	374.9	13.0
20°-30°	519.0	18.0
30°-40°	553.4	19.2
40°-50°	504.9	17.5
50°-60°	395.6	13.7
60°-70°	257.8	8.9
70°-80°	114.2	4.0
80°-90°	24.5	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°	1030.6	35.8
0°-40°	1584.0	55.0
0°-60°	2484.5	86.2
0°-90°	2881.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2881.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1468	1468	1468	1468	1468	
5°	1442	1440	1440	1439	1439	137
15°	1349	1349	1335	1322	1316	379
25°	1169	1162	1144	1103	1072	537
35°	948	942	896	828	808	593
45°	728	713	652	597	573	561
55°	506	490	444	392	372	453
65°	300	283	256	261	217	296
75°	120	112	105	100	110	129
85°	17	19	20	22	24	24
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1467.5	1467.5	1467.5	1467.5	1467.5
2.5°	1457.4	1457.4	1457.4	1455.7	1455.7
5°	1442.1	1440.4	1440.4	1438.7	1438.7
7.5°	1430.2	1428.5	1426.8	1425.1	1421.7
10°	1413.3	1413.3	1411.6	1403.1	1401.4
12.5°	1386.1	1384.4	1377.6	1365.7	1362.4
15°	1348.8	1348.8	1335.2	1321.6	1316.5
17.5°	1308.1	1306.4	1289.4	1275.8	1269.0
20°	1264.0	1260.6	1243.6	1221.5	1209.7
22.5°	1214.8	1214.8	1194.4	1165.6	1153.7
25°	1168.9	1162.2	1143.5	1102.8	1072.2
27.5°	1116.4	1106.2	1085.8	1028.1	992.5
30°	1058.7	1053.6	1024.7	950.1	922.9
32.5°	1004.4	995.9	965.4	887.3	865.3
35°	948.4	941.6	895.8	827.9	807.6
37.5°	892.4	883.9	826.2	771.9	746.5
40°	836.4	826.2	763.5	714.3	687.1
42.5°	783.8	770.2	709.2	656.6	626.0
45°	727.8	712.6	651.5	597.2	573.4
47.5°	671.8	658.3	602.3	546.3	519.2
50°	612.5	600.6	549.7	493.7	464.9
52.5°	563.3	544.6	495.4	439.4	415.7
55°	505.6	490.3	444.5	391.9	371.6
57.5°	453.0	437.7	395.3	346.1	329.1
60°	403.8	381.7	346.1	303.7	290.1
62.5°	349.5	332.5	302.0	266.4	283.3
65°	300.3	283.3	256.2	261.3	217.2
67.5°	246.0	237.5	213.8	190.0	183.2
70°	200.2	190.0	181.5	156.1	149.3
72.5°	159.5	149.3	137.4	123.9	118.8
75°	120.5	112.0	105.2	100.1	110.3
77.5°	83.1	79.7	74.6	69.6	67.9
80°	54.3	52.6	50.9	49.2	47.5
82.5°	32.2	32.2	32.2	32.2	32.2
85°	17.0	18.7	20.4	22.1	23.8
87.5°	10.2	10.2	11.9	13.6	15.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)