

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: P560825

Luminaire Tested: FSR-12-4-LD4-1HI-40-UNV-80-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560825
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-LD4-1HI-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3474.0 lumens
Efficiency: N/A
Efficacy: 80.4 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

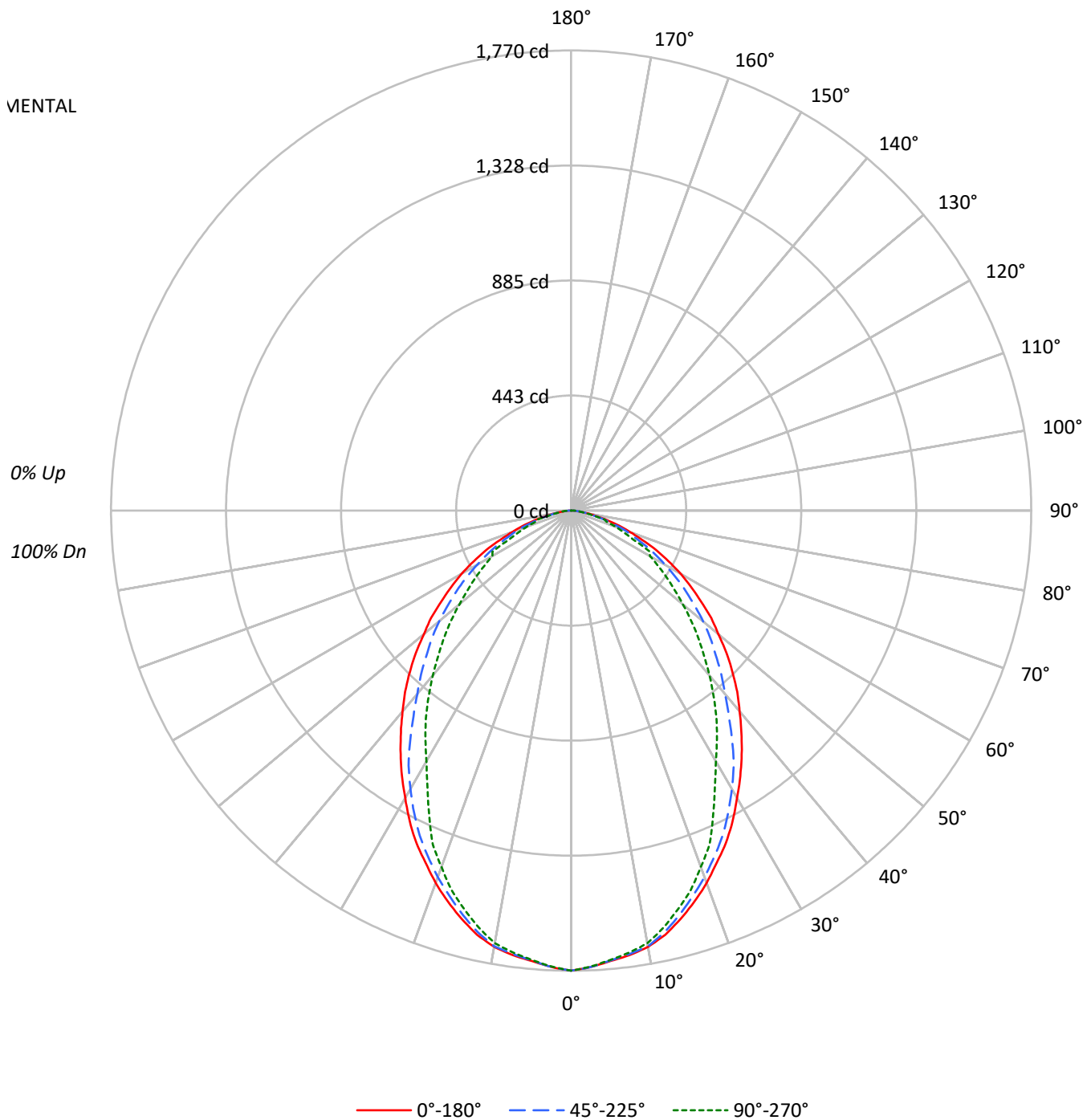
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4762	4762	4762
5°	4697	4692	4686
10°	4656	4651	4617
15°	4531	4485	4423
20°	4365	4294	4177
25°	4185	4094	3839
30°	3967	3840	3458
35°	3757	3549	3199
40°	3543	3234	2910
45°	3340	2990	2632
50°	3092	2775	2346
55°	2860	2515	2102
60°	2620	2246	1883
65°	2306	1967	1668
70°	1899	1722	1416
75°	1511	1318	1383
80°	1015	951	888
85°	633	756	883

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3340 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	164.7	4.7
10°-20°	452.1	13.0
20°-30°	625.9	18.0
30°-40°	667.4	19.2
40°-50°	608.8	17.5
50°-60°	477.0	13.7
60°-70°	310.9	8.9
70°-80°	137.7	4.0
80°-90°	29.6	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°	1242.7	35.8
0°-40°	1910.0	55.0
0°-60°	2995.8	86.2
0°-90°	3474.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3474.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1770	1770	1770	1770	1770	
5°	1739	1737	1737	1735	1735	165
15°	1626	1626	1610	1594	1588	457
25°	1410	1401	1379	1330	1293	647
35°	1144	1135	1080	998	974	715
45°	878	859	786	720	692	676
55°	610	591	536	473	448	547
65°	362	342	309	315	262	357
75°	145	135	127	121	133	156
85°	20	22	24	27	29	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1769.6	1769.6	1769.6	1769.6	1769.6
2.5°	1757.3	1757.3	1757.3	1755.3	1755.3
5°	1738.9	1736.9	1736.9	1734.8	1734.8
7.5°	1724.6	1722.6	1720.5	1718.5	1714.4
10°	1704.1	1704.1	1702.1	1691.9	1689.8
12.5°	1671.4	1669.4	1661.2	1646.9	1642.8
15°	1626.4	1626.4	1610.0	1593.7	1587.5
17.5°	1577.3	1575.3	1554.8	1538.4	1530.3
20°	1524.1	1520.0	1499.6	1473.0	1458.6
22.5°	1464.8	1464.8	1440.2	1405.5	1391.1
25°	1409.5	1401.4	1378.9	1329.8	1292.9
27.5°	1346.1	1333.9	1309.3	1239.7	1196.8
30°	1276.6	1270.4	1235.7	1145.6	1112.9
32.5°	1211.1	1200.9	1164.1	1069.9	1043.4
35°	1143.6	1135.4	1080.2	998.3	973.8
37.5°	1076.1	1065.9	996.3	930.8	900.1
40°	1008.6	996.3	920.6	861.3	828.5
42.5°	945.2	928.8	855.1	791.7	754.9
45°	877.6	859.2	785.6	720.1	691.5
47.5°	810.1	793.8	726.3	658.7	626.0
50°	738.5	724.2	662.8	595.3	560.5
52.5°	679.2	656.7	597.4	529.9	501.2
55°	609.6	591.2	536.0	472.6	448.0
57.5°	546.2	527.8	476.7	417.3	396.9
60°	486.9	460.3	417.3	366.2	349.8
62.5°	421.4	401.0	364.2	321.2	341.6
65°	362.1	341.6	308.9	315.1	261.9
67.5°	296.6	286.4	257.8	229.1	220.9
70°	241.4	229.1	218.9	188.2	180.0
72.5°	192.3	180.0	165.7	149.3	143.2
75°	145.3	135.0	126.8	120.7	133.0
77.5°	100.2	96.2	90.0	83.9	81.8
80°	65.5	63.4	61.4	59.3	57.3
82.5°	38.9	38.9	38.9	38.9	38.9
85°	20.5	22.5	24.5	26.6	28.6
87.5°	12.3	12.3	14.3	16.4	18.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)