

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: P561861

Luminaire Tested: FSR-12-4-LD4-2STD-50-UNV-81-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561861
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-LD4-2STD-50-UNV-81-86-EDD
Description: 1X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6281.0 lumens
Efficiency: N/A
Efficacy: 94.3 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

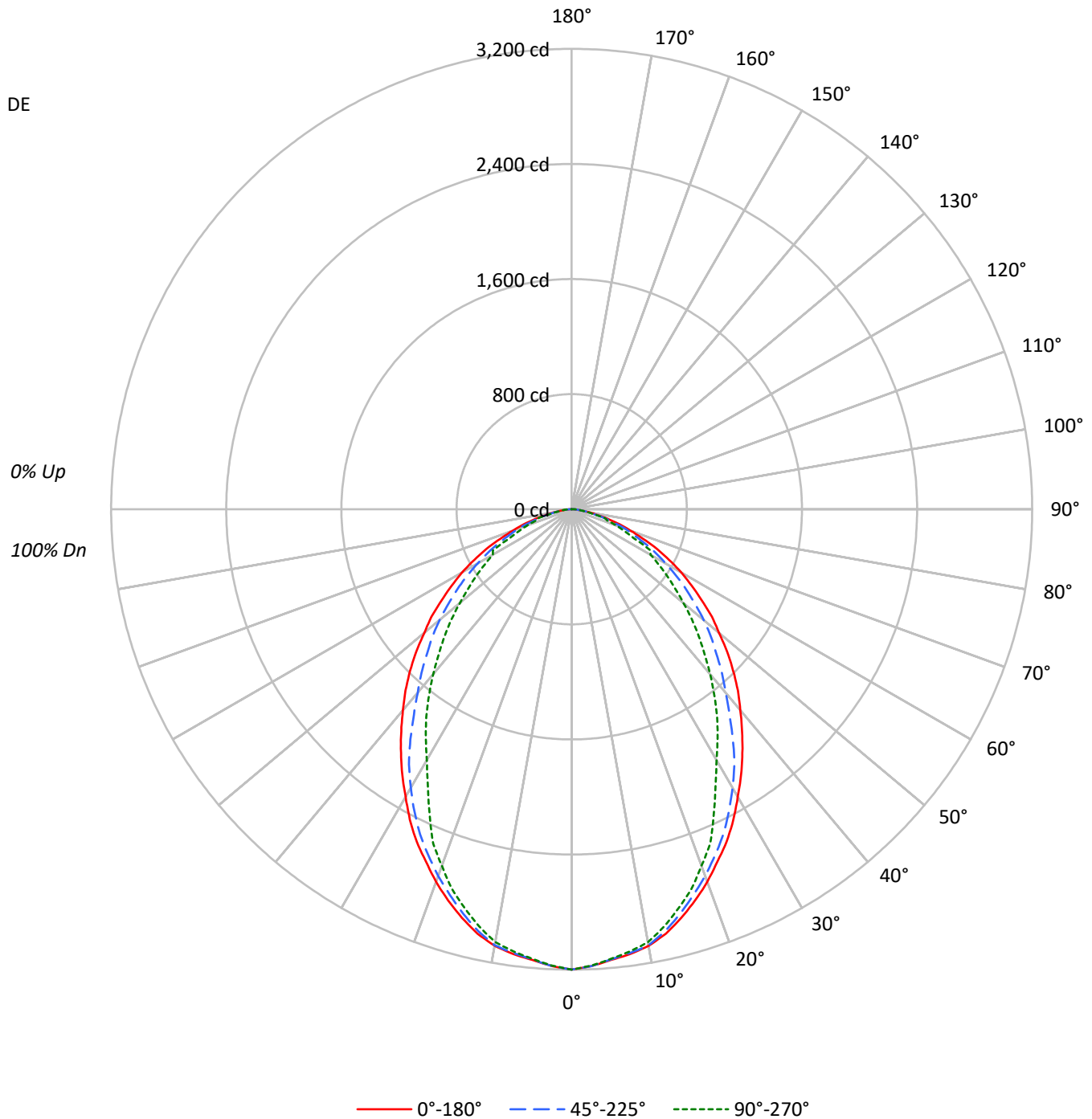
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	8610	8610	8610
5°	8493	8483	8473
10°	8419	8409	8348
15°	8192	8110	7996
20°	7891	7764	7552
25°	7567	7402	6941
30°	7172	6942	6252
35°	6792	6416	5784
40°	6406	5847	5262
45°	6039	5405	4758
50°	5590	5017	4243
55°	5171	4547	3800
60°	4738	4061	3404
65°	4169	3556	3014
70°	3434	3114	2561
75°	2730	2384	2499
80°	1835	1720	1605
85°	1142	1371	1599

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6039 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	297.8	4.7
10°-20°	817.4	13.0
20°-30°	1131.6	18.0
30°-40°	1206.6	19.2
40°-50°	1100.8	17.5
50°-60°	862.4	13.7
60°-70°	562.0	8.9
70°-80°	249.0	4.0
80°-90°	53.5	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°	2246.8	35.8
0°-40°	3453.4	55.0
0°-60°	5416.5	86.2
0°-90°	6281.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6281.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3200	3200	3200	3200	3200	
5°	3144	3140	3140	3137	3137	298
15°	2940	2940	2911	2881	2870	827
25°	2548	2534	2493	2404	2338	1170
35°	2068	2053	1953	1805	1761	1293
45°	1587	1554	1420	1302	1250	1222
55°	1102	1069	969	854	810	989
65°	655	618	558	570	473	645
75°	263	244	229	218	240	281
85°	37	41	44	48	52	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3199.5	3199.5	3199.5	3199.5	3199.5
2.5°	3177.3	3177.3	3177.3	3173.6	3173.6
5°	3144.0	3140.3	3140.3	3136.6	3136.6
7.5°	3118.1	3114.4	3110.7	3107.0	3099.6
10°	3081.1	3081.1	3077.4	3058.9	3055.2
12.5°	3021.9	3018.2	3003.4	2977.5	2970.1
15°	2940.5	2940.5	2911.0	2881.4	2870.3
17.5°	2851.8	2848.1	2811.1	2781.5	2766.7
20°	2755.6	2748.2	2711.2	2663.1	2637.2
22.5°	2648.3	2648.3	2604.0	2541.1	2515.2
25°	2548.5	2533.7	2493.0	2404.2	2337.6
27.5°	2433.8	2411.6	2367.2	2241.5	2163.8
30°	2308.0	2297.0	2234.1	2071.3	2012.1
32.5°	2189.7	2171.2	2104.6	1934.5	1886.4
35°	2067.6	2052.8	1953.0	1805.0	1760.6
37.5°	1945.6	1927.1	1801.3	1683.0	1627.5
40°	1823.5	1801.3	1664.5	1557.2	1498.0
42.5°	1708.8	1679.3	1546.1	1431.4	1364.9
45°	1586.8	1553.5	1420.3	1302.0	1250.2
47.5°	1464.7	1435.1	1313.1	1191.0	1131.8
50°	1335.3	1309.4	1198.4	1076.3	1013.5
52.5°	1228.0	1187.3	1080.0	958.0	906.2
55°	1102.2	1069.0	969.1	854.4	810.0
57.5°	987.6	954.3	861.8	754.6	717.6
60°	880.3	832.2	754.6	662.1	632.5
62.5°	762.0	725.0	658.4	580.7	617.7
65°	654.7	617.7	558.5	569.6	473.4
67.5°	536.3	517.8	466.0	414.3	399.5
70°	436.5	414.3	395.8	340.3	325.5
72.5°	347.7	325.5	299.6	270.0	258.9
75°	262.6	244.1	229.3	218.2	240.4
77.5°	181.2	173.8	162.7	151.7	148.0
80°	118.4	114.7	111.0	107.3	103.6
82.5°	70.3	70.3	70.3	70.3	70.3
85°	37.0	40.7	44.4	48.1	51.8
87.5°	22.2	22.2	25.9	29.6	33.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)