

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: P563015

Luminaire Tested: FSR-24-4-LD4-2STD-50-UNV-81-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563015
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-24-4-LD4-2STD-50-UNV-81-87-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7141.0 lumens
Efficiency: N/A
Efficacy: 107.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

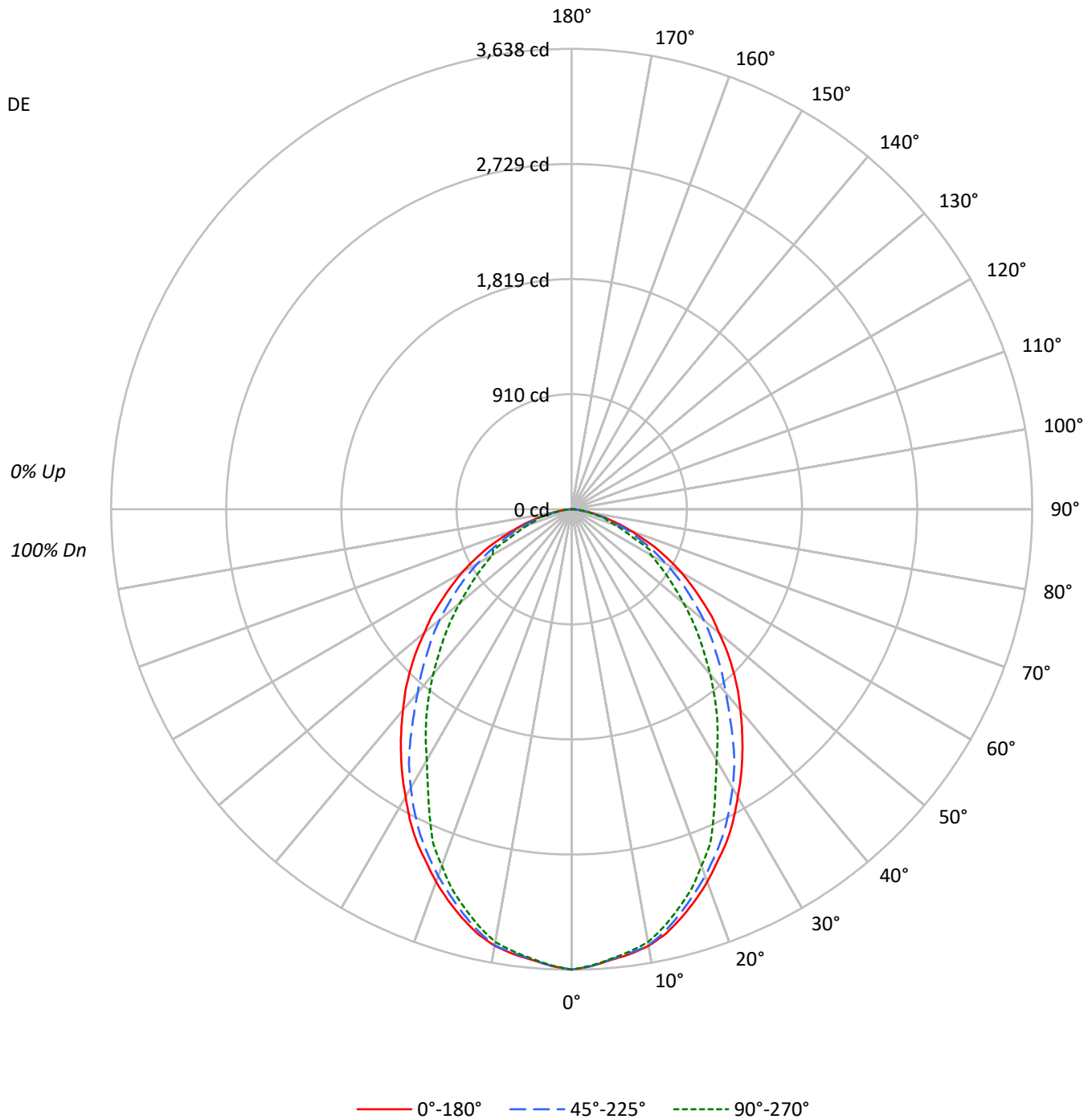
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4894	4894	4894
5°	4828	4822	4816
10°	4786	4780	4746
15°	4657	4610	4546
20°	4486	4414	4293
25°	4301	4208	3946
30°	4077	3946	3554
35°	3861	3647	3288
40°	3641	3324	2991
45°	3433	3073	2705
50°	3178	2852	2412
55°	2940	2585	2160
60°	2693	2309	1935
65°	2370	2022	1714
70°	1952	1770	1456
75°	1552	1355	1421
80°	1043	978	912
85°	650	780	909

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3433 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	338.6	4.7
10°-20°	929.3	13.0
20°-30°	1286.5	18.0
30°-40°	1371.8	19.2
40°-50°	1251.5	17.5
50°-60°	980.4	13.7
60°-70°	639.0	8.9
70°-80°	283.1	4.0
80°-90°	60.8	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°	2554.4	35.8
0°-40°	3926.2	55.0
0°-60°	6158.1	86.2
0°-90°	7141.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7141.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3638	3638	3638	3638	3638	
5°	3574	3570	3570	3566	3566	339
15°	3343	3343	3310	3276	3263	940
25°	2897	2881	2834	2733	2658	1330
35°	2351	2334	2220	2052	2002	1470
45°	1804	1766	1615	1480	1421	1390
55°	1253	1215	1102	971	921	1124
65°	744	702	635	648	538	734
75°	299	278	261	248	273	320
85°	42	46	50	55	59	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3637.5	3637.5	3637.5	3637.5	3637.5
2.5°	3612.3	3612.3	3612.3	3608.1	3608.1
5°	3574.5	3570.2	3570.2	3566.0	3566.0
7.5°	3545.0	3540.8	3536.6	3532.4	3524.0
10°	3503.0	3503.0	3498.8	3477.7	3473.5
12.5°	3435.7	3431.5	3414.7	3385.2	3376.8
15°	3343.2	3343.2	3309.5	3275.9	3263.3
17.5°	3242.2	3238.0	3196.0	3162.3	3145.5
20°	3132.9	3124.5	3082.4	3027.8	2998.3
22.5°	3010.9	3010.9	2960.5	2889.0	2859.6
25°	2897.4	2880.6	2834.3	2733.4	2657.7
27.5°	2767.0	2741.8	2691.4	2548.4	2460.1
30°	2624.1	2611.5	2540.0	2354.9	2287.6
32.5°	2489.5	2468.5	2392.8	2199.3	2144.7
35°	2350.7	2333.9	2220.4	2052.2	2001.7
37.5°	2212.0	2190.9	2048.0	1913.4	1850.3
40°	2073.2	2048.0	1892.4	1770.4	1703.1
42.5°	1942.8	1909.2	1757.8	1627.4	1551.7
45°	1804.0	1766.2	1614.8	1480.2	1421.4
47.5°	1665.3	1631.6	1492.9	1354.1	1286.8
50°	1518.1	1488.7	1362.5	1223.7	1152.2
52.5°	1396.1	1349.9	1227.9	1089.2	1030.3
55°	1253.2	1215.3	1101.8	971.4	920.9
57.5°	1122.8	1085.0	979.8	857.9	815.8
60°	1000.8	946.2	857.9	752.7	719.1
62.5°	866.3	824.2	748.5	660.2	702.3
65°	744.3	702.3	635.0	647.6	538.3
67.5°	609.8	588.7	529.9	471.0	454.2
70°	496.2	471.0	450.0	386.9	370.1
72.5°	395.3	370.1	340.6	307.0	294.4
75°	298.6	277.5	260.7	248.1	273.3
77.5°	206.1	197.6	185.0	172.4	168.2
80°	134.6	130.4	126.2	122.0	117.7
82.5°	79.9	79.9	79.9	79.9	79.9
85°	42.1	46.3	50.5	54.7	58.9
87.5°	25.2	25.2	29.4	33.6	37.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)