

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: P562945

Luminaire Tested: FSR-24-4-LD4-2STD-40-UNV-81-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562945
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-40-UNV-81-84-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7489.0 lumens
Efficiency: N/A
Efficacy: 112.4 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

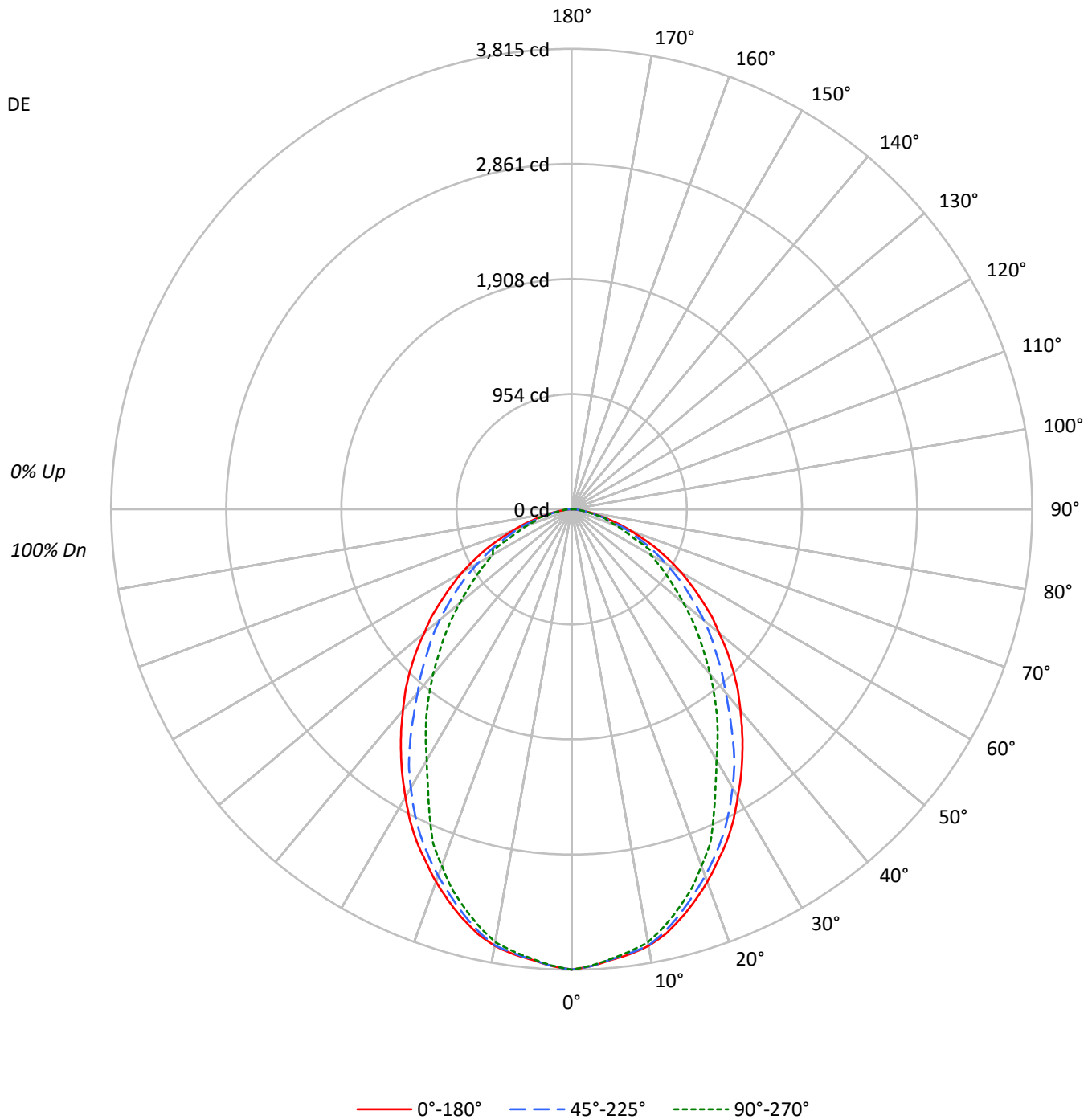
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5133	5133	5133
5°	5063	5057	5051
10°	5019	5013	4977
15°	4884	4835	4767
20°	4704	4629	4502
25°	4511	4413	4138
30°	4275	4138	3727
35°	4049	3825	3448
40°	3819	3486	3137
45°	3600	3222	2836
50°	3333	2991	2529
55°	3083	2711	2266
60°	2824	2421	2029
65°	2485	2120	1797
70°	2047	1856	1527
75°	1628	1421	1490
80°	1093	1025	957
85°	681	817	953

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3600 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	355.1	4.7
10°-20°	974.6	13.0
20°-30°	1349.2	18.0
30°-40°	1438.7	19.2
40°-50°	1312.5	17.5
50°-60°	1028.2	13.7
60°-70°	670.1	8.9
70°-80°	296.9	4.0
80°-90°	63.7	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°	2678.9	35.8
0°-40°	4117.5	55.0
0°-60°	6458.2	86.2
0°-90°	7489.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7489.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3815	3815	3815	3815	3815	
5°	3749	3744	3744	3740	3740	356
15°	3506	3506	3471	3436	3422	986
25°	3039	3021	2972	2867	2787	1395
35°	2465	2448	2329	2152	2099	1541
45°	1892	1852	1694	1552	1491	1457
55°	1314	1274	1156	1019	966	1179
65°	781	736	666	679	564	769
75°	313	291	273	260	287	336
85°	44	48	53	57	62	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3814.8	3814.8	3814.8	3814.8	3814.8
2.5°	3788.3	3788.3	3788.3	3783.9	3783.9
5°	3748.6	3744.2	3744.2	3739.8	3739.8
7.5°	3717.8	3713.4	3709.0	3704.5	3695.7
10°	3673.7	3673.7	3669.3	3647.2	3642.8
12.5°	3603.1	3598.7	3581.1	3550.2	3541.4
15°	3506.1	3506.1	3470.8	3435.5	3422.3
17.5°	3400.2	3395.8	3351.7	3316.4	3298.8
20°	3285.6	3276.8	3232.7	3175.3	3144.5
22.5°	3157.7	3157.7	3104.8	3029.8	2998.9
25°	3038.6	3021.0	2972.5	2866.6	2787.2
27.5°	2901.9	2875.4	2822.5	2672.6	2579.9
30°	2751.9	2738.7	2663.7	2469.7	2399.1
32.5°	2610.8	2588.8	2509.4	2306.5	2249.2
35°	2465.3	2447.6	2328.6	2152.2	2099.2
37.5°	2319.7	2297.7	2147.8	2006.6	1940.5
40°	2174.2	2147.8	1984.6	1856.7	1786.1
42.5°	2037.5	2002.2	1843.5	1706.7	1627.4
45°	1892.0	1852.3	1693.5	1552.4	1490.6
47.5°	1746.4	1711.1	1565.6	1420.1	1349.5
50°	1592.1	1561.2	1428.9	1283.4	1208.4
52.5°	1464.2	1415.7	1287.8	1142.2	1080.5
55°	1314.2	1274.5	1155.5	1018.7	965.8
57.5°	1177.5	1137.8	1027.6	899.7	855.6
60°	1049.6	992.3	899.7	789.4	754.1
62.5°	908.5	864.4	785.0	692.4	736.5
65°	780.6	736.5	665.9	679.2	564.5
67.5°	639.5	617.4	555.7	493.9	476.3
70°	520.4	493.9	471.9	405.7	388.1
72.5°	414.6	388.1	357.2	321.9	308.7
75°	313.1	291.1	273.4	260.2	286.7
77.5°	216.1	207.3	194.0	180.8	176.4
80°	141.1	136.7	132.3	127.9	123.5
82.5°	83.8	83.8	83.8	83.8	83.8
85°	44.1	48.5	52.9	57.3	61.7
87.5°	26.5	26.5	30.9	35.3	39.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)