

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: P563045

Luminaire Tested: FSR-24-4-LD4-2STD-50-UNV-93-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563045
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-93-86-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7784.0 lumens
Efficiency: N/A
Efficacy: 116.9 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

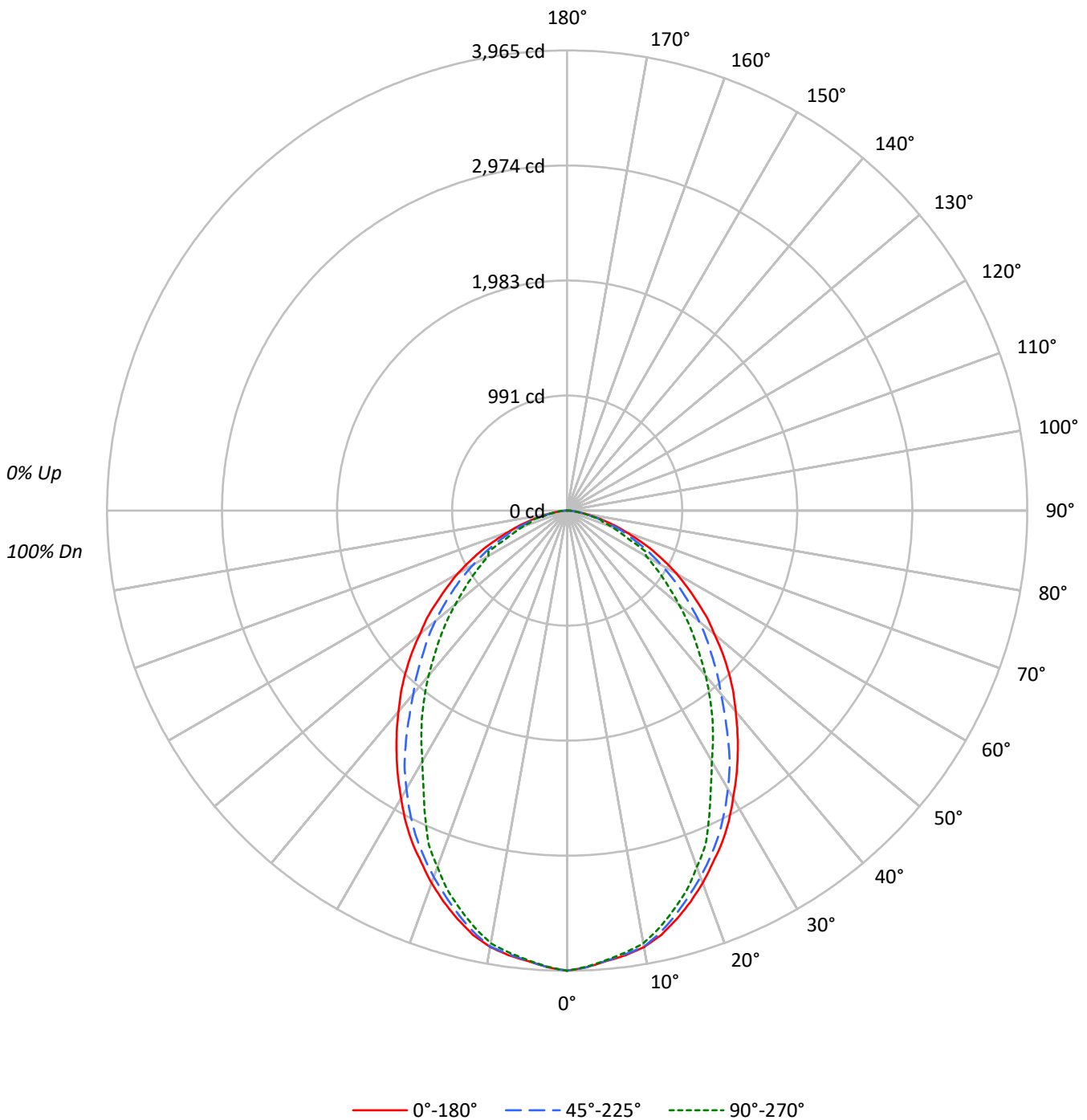
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5335	5335	5335
5°	5262	5256	5250
10°	5217	5211	5173
15°	5076	5025	4955
20°	4890	4811	4680
25°	4689	4587	4301
30°	4444	4302	3874
35°	4209	3975	3584
40°	3969	3623	3261
45°	3742	3349	2948
50°	3464	3109	2629
55°	3204	2817	2355
60°	2936	2516	2109
65°	2583	2204	1868
70°	2128	1930	1587
75°	1692	1477	1549
80°	1137	1065	994
85°	707	849	991

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3742 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	369.1	4.7
10°-20°	1013.0	13.0
20°-30°	1402.4	18.0
30°-40°	1495.3	19.2
40°-50°	1364.2	17.5
50°-60°	1068.7	13.7
60°-70°	696.5	8.9
70°-80°	308.6	4.0
80°-90°	66.3	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°	2784.4	35.8
0°-40°	4279.7	55.0
0°-60°	6712.6	86.2
0°-90°	7784.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7784.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3965	3965	3965	3965	3965	
5°	3896	3892	3892	3887	3887	370
15°	3644	3644	3608	3571	3557	1024
25°	3158	3140	3090	2980	2897	1450
35°	2562	2544	2420	2237	2182	1602
45°	1966	1925	1760	1614	1549	1515
55°	1366	1325	1201	1059	1004	1225
65°	811	766	692	706	587	800
75°	326	302	284	270	298	349
85°	46	50	55	60	64	64
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3965.1	3965.1	3965.1	3965.1	3965.1
2.5°	3937.6	3937.6	3937.6	3933.0	3933.0
5°	3896.3	3891.7	3891.7	3887.1	3887.1
7.5°	3864.2	3859.6	3855.1	3850.5	3841.3
10°	3818.4	3818.4	3813.8	3790.9	3786.3
12.5°	3745.0	3740.5	3722.1	3690.0	3680.9
15°	3644.2	3644.2	3607.5	3570.9	3557.1
17.5°	3534.2	3529.6	3483.8	3447.1	3428.8
20°	3415.0	3405.8	3360.0	3300.4	3268.3
22.5°	3282.1	3282.1	3227.1	3149.1	3117.0
25°	3158.3	3140.0	3089.5	2979.5	2897.0
27.5°	3016.2	2988.7	2933.7	2777.8	2681.6
30°	2860.3	2846.6	2768.7	2567.0	2493.6
32.5°	2713.7	2690.7	2608.2	2397.4	2337.8
35°	2562.4	2544.1	2420.3	2236.9	2181.9
37.5°	2411.1	2388.2	2232.4	2085.7	2016.9
40°	2259.9	2232.4	2062.8	1929.8	1856.5
42.5°	2117.8	2081.1	1916.1	1774.0	1691.5
45°	1966.5	1925.2	1760.2	1613.5	1549.4
47.5°	1815.2	1778.5	1627.3	1476.0	1402.7
50°	1654.8	1622.7	1485.2	1333.9	1256.0
52.5°	1521.9	1471.4	1338.5	1187.2	1123.1
55°	1366.0	1324.7	1201.0	1058.9	1003.9
57.5°	1223.9	1182.6	1068.0	935.1	889.3
60°	1091.0	1031.4	935.1	820.5	783.8
62.5°	944.3	898.4	815.9	719.7	765.5
65°	811.3	765.5	692.2	705.9	586.7
67.5°	664.7	641.7	577.6	513.4	495.1
70°	540.9	513.4	490.5	421.7	403.4
72.5°	430.9	403.4	371.3	334.6	320.9
75°	325.5	302.5	284.2	270.4	298.0
77.5°	224.6	215.4	201.7	187.9	183.4
80°	146.7	142.1	137.5	132.9	128.3
82.5°	87.1	87.1	87.1	87.1	87.1
85°	45.8	50.4	55.0	59.6	64.2
87.5°	27.5	27.5	32.1	36.7	41.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)