

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: P563882

Luminaire Tested: FSR-24-4-LD4-4LO-35-UNV-93-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563882
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-LD4-4LO-35-UNV-93-94-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9795.0 lumens
Efficiency: N/A
Efficacy: 104.6 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

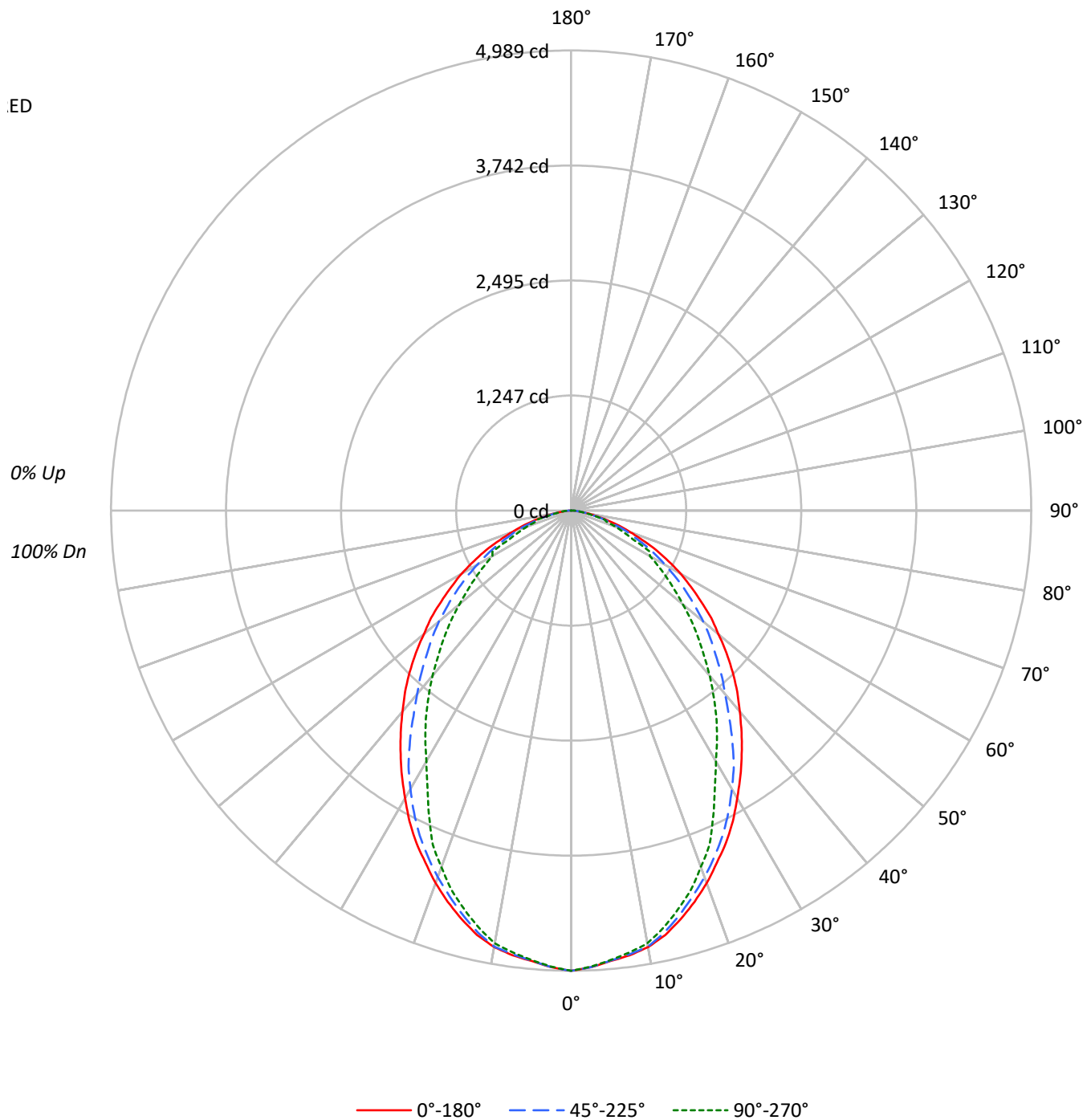
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6713	6713	6713
5°	6622	6614	6606
10°	6565	6557	6509
15°	6388	6323	6235
20°	6153	6054	5889
25°	5900	5772	5412
30°	5592	5413	4875
35°	5296	5003	4510
40°	4995	4559	4103
45°	4709	4215	3710
50°	4359	3912	3308
55°	4032	3545	2963
60°	3694	3166	2654
65°	3251	2773	2351
70°	2677	2428	1997
75°	2129	1859	1949
80°	1430	1340	1251
85°	891	1068	1247

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4709 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	464.5	4.7
10°-20°	1274.6	13.0
20°-30°	1764.7	18.0
30°-40°	1881.6	19.2
40°-50°	1716.6	17.5
50°-60°	1344.8	13.7
60°-70°	876.5	8.9
70°-80°	388.3	4.0
80°-90°	83.4	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°	3503.8	35.8
0°-40°	5385.4	55.0
0°-60°	8446.8	86.2
0°-90°	9795.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9795.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4989	4989	4989	4989	4989	
5°	4903	4897	4897	4891	4891	465
15°	4586	4586	4540	4493	4476	1289
25°	3974	3951	3888	3749	3646	1825
35°	3224	3201	3046	2815	2746	2016
45°	2474	2423	2215	2030	1950	1906
55°	1719	1667	1511	1332	1263	1542
65°	1021	963	871	888	738	1006
75°	410	381	358	340	375	439
85°	58	63	69	75	81	80
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4989.4	4989.4	4989.4	4989.4	4989.4
2.5°	4954.8	4954.8	4954.8	4949.1	4949.1
5°	4902.9	4897.2	4897.2	4891.4	4891.4
7.5°	4862.5	4856.8	4851.0	4845.2	4833.7
10°	4804.9	4804.9	4799.1	4770.3	4764.5
12.5°	4712.6	4706.8	4683.7	4643.4	4631.8
15°	4585.7	4585.7	4539.5	4493.4	4476.1
17.5°	4447.2	4441.5	4383.8	4337.6	4314.6
20°	4297.3	4285.7	4228.0	4153.1	4112.7
22.5°	4130.0	4130.0	4060.8	3962.7	3922.3
25°	3974.2	3951.2	3887.7	3749.3	3645.5
27.5°	3795.4	3760.8	3691.6	3495.5	3374.4
30°	3599.3	3582.0	3484.0	3230.2	3137.9
32.5°	3414.7	3385.9	3282.1	3016.7	2941.8
35°	3224.4	3201.3	3045.6	2814.9	2745.6
37.5°	3034.0	3005.2	2809.1	2624.5	2538.0
40°	2843.7	2809.1	2595.7	2428.4	2336.1
42.5°	2664.9	2618.7	2411.1	2232.3	2128.4
45°	2474.5	2422.6	2215.0	2030.4	1949.6
47.5°	2284.2	2238.0	2047.7	1857.3	1765.1
50°	2082.3	2041.9	1868.9	1678.5	1580.5
52.5°	1915.0	1851.6	1684.3	1493.9	1413.2
55°	1718.9	1667.0	1511.3	1332.4	1263.2
57.5°	1540.1	1488.2	1344.0	1176.7	1119.0
60°	1372.8	1297.8	1176.7	1032.5	986.4
62.5°	1188.2	1130.6	1026.7	905.6	963.3
65°	1021.0	963.3	871.0	888.3	738.3
67.5°	836.4	807.5	726.8	646.0	623.0
70°	680.6	646.0	617.2	530.7	507.6
72.5°	542.2	507.6	467.2	421.1	403.8
75°	409.5	380.7	357.6	340.3	374.9
77.5°	282.6	271.1	253.8	236.5	230.7
80°	184.6	178.8	173.0	167.3	161.5
82.5°	109.6	109.6	109.6	109.6	109.6
85°	57.7	63.4	69.2	75.0	80.8
87.5°	34.6	34.6	40.4	46.1	51.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)