

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: P562586

Luminaire Tested: FSR-24-4-LD4-2HI-40-UNV-82-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562586
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-LD4-2HI-40-UNV-82-94-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7573.0 lumens
Efficiency: N/A
Efficacy: 87.7 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

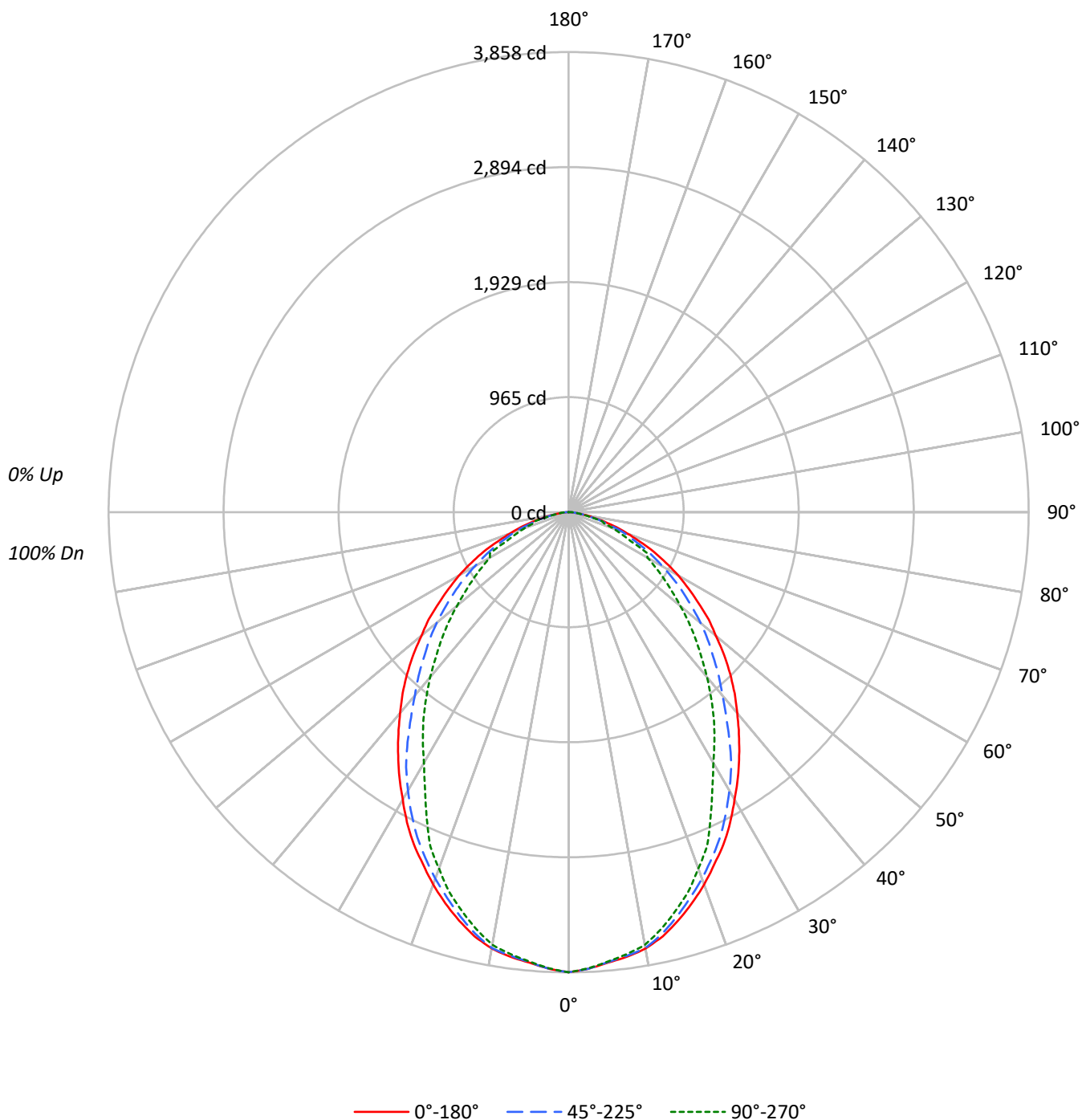
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	5190	5190	5190
5°	5120	5114	5108
10°	5075	5069	5033
15°	4939	4889	4821
20°	4757	4681	4553
25°	4562	4462	4184
30°	4323	4185	3769
35°	4095	3868	3487
40°	3862	3525	3172
45°	3640	3259	2868
50°	3370	3024	2558
55°	3118	2741	2291
60°	2856	2448	2052
65°	2513	2144	1817
70°	2070	1877	1544
75°	1646	1437	1507
80°	1106	1037	968
85°	689	826	963

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3640 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	359.1	4.7
10°-20°	985.5	13.0
20°-30°	1364.3	18.0
30°-40°	1454.8	19.2
40°-50°	1327.2	17.5
50°-60°	1039.7	13.7
60°-70°	677.7	8.9
70°-80°	300.2	4.0
80°-90°	64.5	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°	2708.9	35.8
0°-40°	4163.7	55.0
0°-60°	6530.6	86.2
0°-90°	7573.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7573.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3858	3858	3858	3858	3858	
5°	3791	3786	3786	3782	3782	360
15°	3545	3545	3510	3474	3461	997
25°	3073	3055	3006	2899	2818	1411
35°	2493	2475	2355	2176	2123	1559
45°	1913	1873	1712	1570	1507	1474
55°	1329	1289	1168	1030	977	1192
65°	789	745	673	687	571	778
75°	317	294	276	263	290	339
85°	45	49	54	58	62	62
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3857.6	3857.6	3857.6	3857.6	3857.6
2.5°	3830.8	3830.8	3830.8	3826.4	3826.4
5°	3790.7	3786.2	3786.2	3781.8	3781.8
7.5°	3759.5	3755.0	3750.6	3746.1	3737.2
10°	3714.9	3714.9	3710.4	3688.1	3683.7
12.5°	3643.5	3639.1	3621.2	3590.0	3581.1
15°	3545.4	3545.4	3509.7	3474.1	3460.7
17.5°	3438.4	3433.9	3389.3	3353.6	3335.8
20°	3322.4	3313.5	3268.9	3210.9	3179.7
22.5°	3193.1	3193.1	3139.6	3063.8	3032.6
25°	3072.7	3054.9	3005.8	2898.8	2818.5
27.5°	2934.4	2907.7	2854.2	2702.5	2608.9
30°	2782.8	2769.4	2693.6	2497.4	2426.0
32.5°	2640.1	2617.8	2537.5	2332.4	2274.4
35°	2492.9	2475.1	2354.7	2176.3	2122.8
37.5°	2345.8	2323.5	2171.8	2029.1	1962.2
40°	2198.6	2171.8	2006.8	1877.5	1806.2
42.5°	2060.4	2024.7	1864.1	1725.9	1645.6
45°	1913.2	1873.0	1712.5	1569.8	1507.4
47.5°	1766.0	1730.3	1583.2	1436.0	1364.6
50°	1609.9	1578.7	1444.9	1297.8	1221.9
52.5°	1480.6	1431.5	1302.2	1155.0	1092.6
55°	1329.0	1288.8	1168.4	1030.2	976.7
57.5°	1190.7	1150.6	1039.1	909.8	865.2
60°	1061.4	1003.4	909.8	798.3	762.6
62.5°	918.7	874.1	793.8	700.2	744.8
65°	789.4	744.8	673.4	686.8	570.8
67.5°	646.6	624.3	561.9	499.5	481.6
70°	526.2	499.5	477.2	410.3	392.4
72.5°	419.2	392.4	361.2	325.6	312.2
75°	316.6	294.3	276.5	263.1	289.9
77.5°	218.5	209.6	196.2	182.8	178.4
80°	142.7	138.2	133.8	129.3	124.9
82.5°	84.7	84.7	84.7	84.7	84.7
85°	44.6	49.1	53.5	58.0	62.4
87.5°	26.8	26.8	31.2	35.7	40.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)