

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: P563339

Luminaire Tested: FSR-24-4-LD4-3LO-40-UNV-81-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563339
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-LD4-3LO-40-UNV-81-94-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8407.0 lumens
Efficiency: N/A
Efficacy: 119.8 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

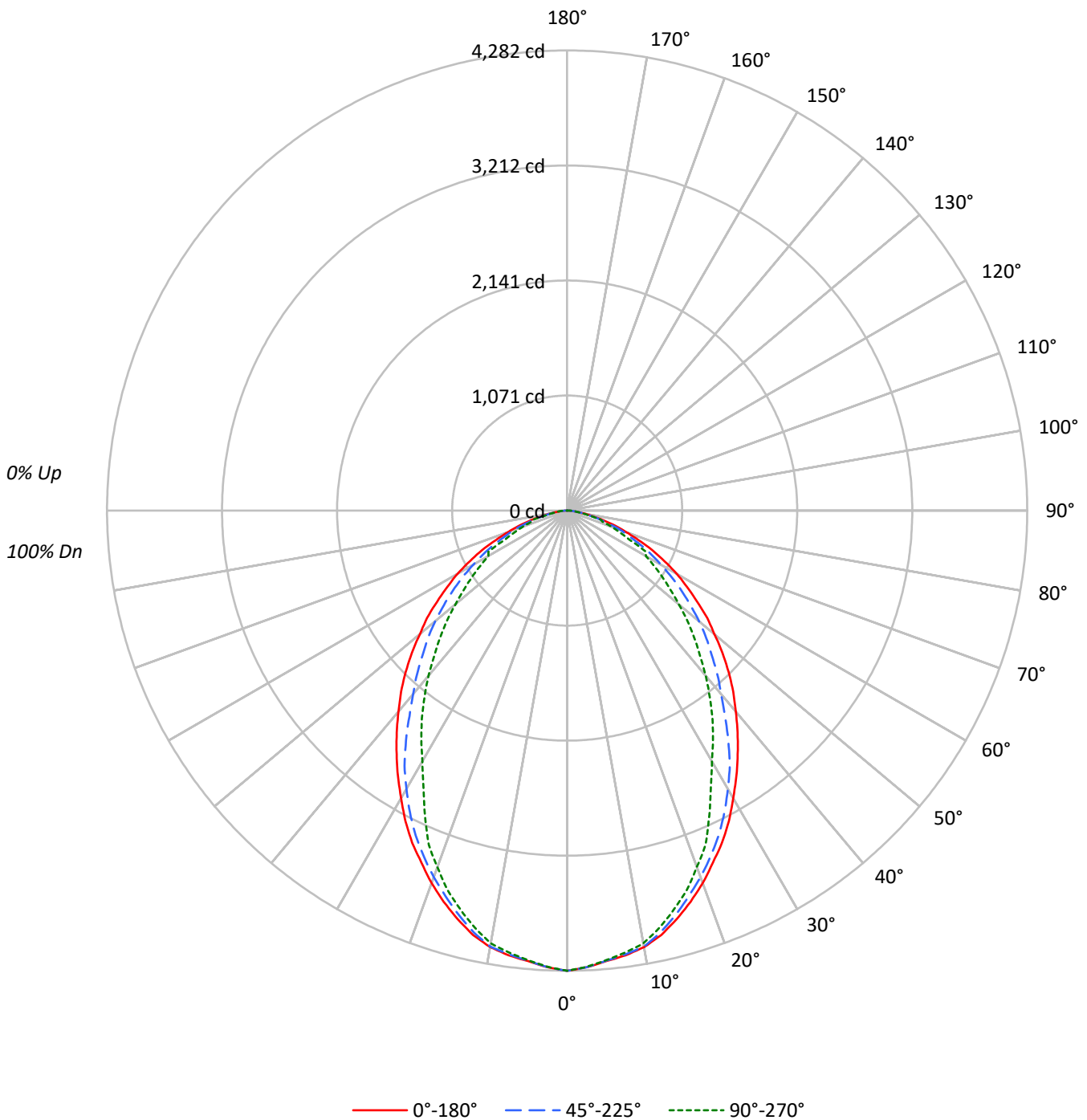
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5762	5762	5762
5°	5684	5677	5670
10°	5634	5628	5587
15°	5483	5427	5351
20°	5281	5196	5054
25°	5064	4954	4645
30°	4800	4646	4184
35°	4546	4294	3871
40°	4287	3913	3522
45°	4041	3617	3184
50°	3741	3358	2839
55°	3461	3043	2543
60°	3171	2718	2278
65°	2790	2380	2018
70°	2298	2084	1714
75°	1827	1595	1673
80°	1227	1151	1074
85°	764	917	1070

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4041 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	398.6	4.7
10°-20°	1094.0	13.0
20°-30°	1514.6	18.0
30°-40°	1615.0	19.2
40°-50°	1473.3	17.5
50°-60°	1154.3	13.7
60°-70°	752.3	8.9
70°-80°	333.3	4.0
80°-90°	71.6	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°	3007.3	35.8
0°-40°	4622.3	55.0
0°-60°	7249.9	86.2
0°-90°	8407.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8407.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4282	4282	4282	4282	4282	
5°	4208	4203	4203	4198	4198	399
15°	3936	3936	3896	3857	3842	1106
25°	3411	3391	3337	3218	3129	1566
35°	2768	2748	2614	2416	2357	1730
45°	2124	2079	1901	1743	1673	1636
55°	1475	1431	1297	1144	1084	1323
65°	876	827	748	762	634	864
75°	352	327	307	292	322	377
85°	50	54	59	64	69	69
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4282.4	4282.4	4282.4	4282.4	4282.4
2.5°	4252.7	4252.7	4252.7	4247.8	4247.8
5°	4208.2	4203.2	4203.2	4198.3	4198.3
7.5°	4173.5	4168.5	4163.6	4158.6	4148.7
10°	4124.0	4124.0	4119.0	4094.3	4089.3
12.5°	4044.8	4039.8	4020.0	3985.4	3975.5
15°	3935.9	3935.9	3896.3	3856.6	3841.8
17.5°	3817.0	3812.1	3762.6	3723.0	3703.2
20°	3688.3	3678.4	3628.9	3564.6	3529.9
22.5°	3544.7	3544.7	3485.3	3401.2	3366.5
25°	3411.1	3391.3	3336.8	3218.0	3128.9
27.5°	3257.6	3227.9	3168.5	3000.2	2896.2
30°	3089.3	3074.4	2990.3	2772.4	2693.2
32.5°	2930.9	2906.1	2817.0	2589.3	2524.9
35°	2767.5	2747.7	2614.0	2416.0	2356.6
37.5°	2604.1	2579.3	2411.0	2252.6	2178.3
40°	2440.7	2411.0	2227.8	2084.3	2005.1
42.5°	2287.3	2247.6	2069.4	1915.9	1826.8
45°	2123.9	2079.3	1901.1	1742.7	1673.4
47.5°	1960.5	1920.9	1757.5	1594.1	1514.9
50°	1787.2	1752.6	1604.0	1440.7	1356.5
52.5°	1643.7	1589.2	1445.6	1282.2	1212.9
55°	1475.3	1430.8	1297.1	1143.6	1084.2
57.5°	1321.9	1277.3	1153.5	1010.0	960.4
60°	1178.3	1113.9	1010.0	886.2	846.6
62.5°	1019.9	970.4	881.2	777.3	826.8
65°	876.3	826.8	747.6	762.4	633.7
67.5°	717.9	693.1	623.8	554.5	534.7
70°	584.2	554.5	529.7	455.5	435.7
72.5°	465.4	435.7	401.0	361.4	346.6
75°	351.5	326.8	306.9	292.1	321.8
77.5°	242.6	232.7	217.8	203.0	198.0
80°	158.4	153.5	148.5	143.6	138.6
82.5°	94.1	94.1	94.1	94.1	94.1
85°	49.5	54.5	59.4	64.4	69.3
87.5°	29.7	29.7	34.7	39.6	44.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)