

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: P563116

Luminaire Tested: FSR-24-4-LD4-3HI-35-UNV-93-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563116
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-LD4-3HI-35-UNV-93-96-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 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: 11934.0 lumens
Efficiency: N/A
Efficacy: 92.1 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

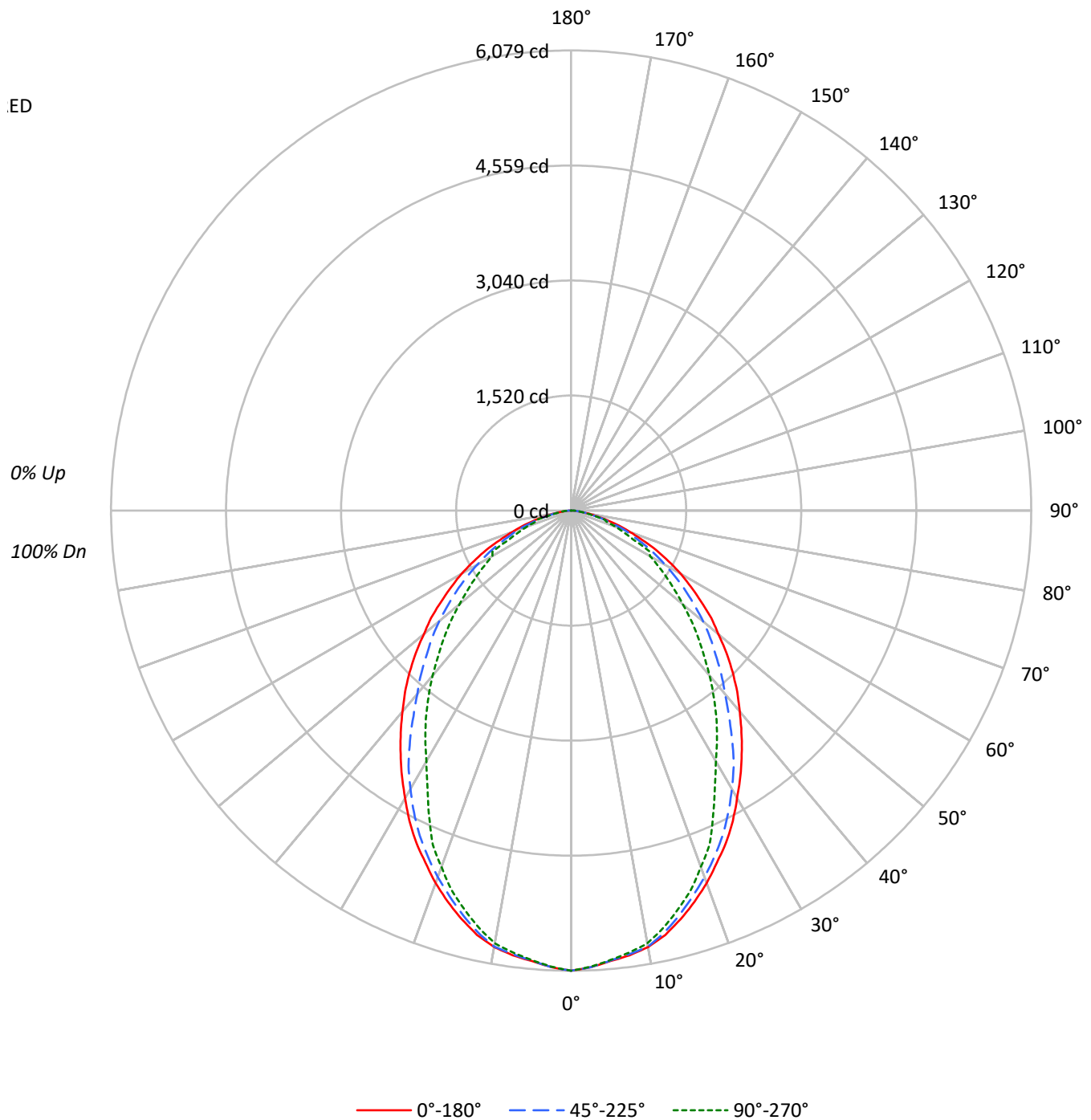
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	8179	8179	8179
5°	8068	8059	8049
10°	7998	7989	7931
15°	7783	7704	7596
20°	7497	7376	7175
25°	7189	7032	6594
30°	6813	6595	5940
35°	6453	6095	5495
40°	6085	5555	4999
45°	5737	5135	4520
50°	5310	4766	4031
55°	4913	4319	3610
60°	4501	3858	3234
65°	3960	3379	2864
70°	3262	2958	2433
75°	2594	2265	2375
80°	1743	1633	1525
85°	1085	1301	1519

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5737 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	565.9	4.7
10°-20°	1553.0	13.0
20°-30°	2150.0	18.0
30°-40°	2292.5	19.2
40°-50°	2091.5	17.5
50°-60°	1638.5	13.7
60°-70°	1067.9	8.9
70°-80°	473.1	4.0
80°-90°	101.6	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°	4268.9	35.8
0°-40°	6561.4	55.0
0°-60°	10291.4	86.2
0°-90°	11934.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11934.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6079	6079	6079	6079	6079	
5°	5974	5967	5967	5960	5960	567
15°	5587	5587	5531	5475	5454	1571
25°	4842	4814	4737	4568	4442	2223
35°	3928	3900	3711	3430	3345	2456
45°	3015	2952	2699	2474	2375	2322
55°	2094	2031	1841	1623	1539	1878
65°	1244	1174	1061	1082	900	1226
75°	499	464	436	415	457	535
85°	70	77	84	91	98	97
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6079.0	6079.0	6079.0	6079.0	6079.0
2.5°	6036.9	6036.9	6036.9	6029.8	6029.8
5°	5973.6	5966.6	5966.6	5959.5	5959.5
7.5°	5924.4	5917.4	5910.4	5903.3	5889.3
10°	5854.1	5854.1	5847.1	5812.0	5804.9
12.5°	5741.7	5734.7	5706.5	5657.4	5643.3
15°	5587.1	5587.1	5530.9	5474.6	5453.5
17.5°	5418.4	5411.4	5341.1	5284.9	5256.8
20°	5235.7	5221.6	5151.4	5060.0	5010.8
22.5°	5031.9	5031.9	4947.5	4828.1	4778.9
25°	4842.1	4814.0	4736.7	4568.0	4441.5
27.5°	4624.3	4582.1	4497.8	4258.8	4111.2
30°	4385.3	4364.2	4244.8	3935.6	3823.1
32.5°	4160.4	4125.3	3998.8	3675.5	3584.2
35°	3928.5	3900.4	3710.7	3429.6	3345.2
37.5°	3696.6	3661.5	3422.5	3197.6	3092.2
40°	3464.7	3422.5	3162.5	2958.7	2846.2
42.5°	3246.8	3190.6	2937.6	2719.7	2593.2
45°	3014.9	2951.7	2698.7	2473.8	2375.4
47.5°	2783.0	2726.8	2494.9	2262.9	2150.5
50°	2537.0	2487.8	2277.0	2045.1	1925.6
52.5°	2333.2	2255.9	2052.1	1820.2	1721.8
55°	2094.3	2031.0	1841.3	1623.4	1539.1
57.5°	1876.4	1813.2	1637.5	1433.7	1363.4
60°	1672.6	1581.2	1433.7	1258.0	1201.7
62.5°	1447.7	1377.4	1250.9	1103.4	1173.6
65°	1243.9	1173.6	1061.2	1082.3	899.6
67.5°	1019.0	983.9	885.5	787.1	759.0
70°	829.3	787.1	752.0	646.6	618.4
72.5°	660.6	618.4	569.2	513.0	491.9
75°	499.0	463.8	435.7	414.6	456.8
77.5°	344.4	330.3	309.2	288.1	281.1
80°	224.9	217.9	210.8	203.8	196.8
82.5°	133.5	133.5	133.5	133.5	133.5
85°	70.3	77.3	84.3	91.4	98.4
87.5°	42.2	42.2	49.2	56.2	63.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)