

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: P562979

Luminaire Tested: FSR-24-4-LD4-2STD-40-UNV-93-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562979
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-40-UNV-93-85-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7742.0 lumens
Efficiency: N/A
Efficacy: 116.2 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

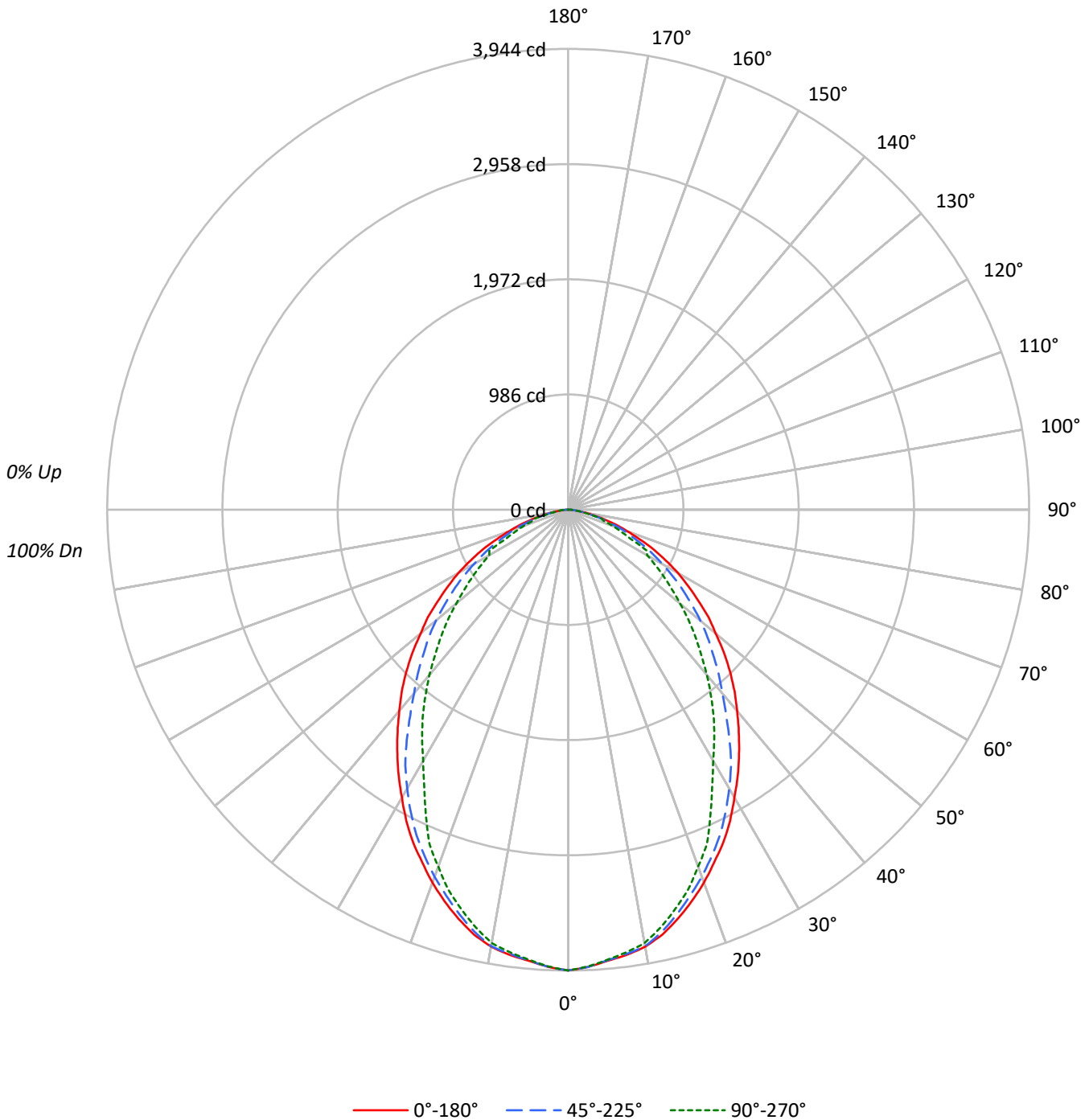
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5306	5306	5306
5°	5234	5228	5222
10°	5189	5182	5145
15°	5049	4998	4928
20°	4863	4785	4654
25°	4664	4562	4278
30°	4420	4278	3853
35°	4186	3954	3565
40°	3948	3603	3243
45°	3722	3331	2932
50°	3445	3092	2615
55°	3187	2802	2342
60°	2920	2503	2098
65°	2569	2192	1858
70°	2116	1919	1578
75°	1683	1470	1540
80°	1130	1060	989
85°	704	844	985

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3722 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	367.1	4.7
10°-20°	1007.5	13.0
20°-30°	1394.8	18.0
30°-40°	1487.2	19.2
40°-50°	1356.8	17.5
50°-60°	1063.0	13.7
60°-70°	692.8	8.9
70°-80°	306.9	4.0
80°-90°	65.9	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°	2769.4	35.8
0°-40°	4256.6	55.0
0°-60°	6676.4	86.2
0°-90°	7742.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7742.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3944	3944	3944	3944	3944	
5°	3875	3871	3871	3866	3866	368
15°	3624	3624	3588	3552	3538	1019
25°	3141	3123	3073	2964	2881	1442
35°	2549	2530	2407	2225	2170	1593
45°	1956	1915	1751	1605	1541	1507
55°	1359	1318	1194	1053	998	1219
65°	807	761	688	702	584	795
75°	324	301	283	269	296	347
85°	46	50	55	59	64	63
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3943.7	3943.7	3943.7	3943.7	3943.7
2.5°	3916.3	3916.3	3916.3	3911.8	3911.8
5°	3875.3	3870.7	3870.7	3866.2	3866.2
7.5°	3843.4	3838.8	3834.3	3829.7	3820.6
10°	3797.8	3797.8	3793.2	3770.4	3765.9
12.5°	3724.8	3720.3	3702.0	3670.1	3661.0
15°	3624.5	3624.5	3588.1	3551.6	3537.9
17.5°	3515.1	3510.6	3465.0	3428.5	3410.2
20°	3396.6	3387.5	3341.9	3282.6	3250.7
22.5°	3264.4	3264.4	3209.6	3132.1	3100.2
25°	3141.3	3123.0	3072.9	2963.5	2881.4
27.5°	2999.9	2972.6	2917.9	2762.8	2667.1
30°	2844.9	2831.2	2753.7	2553.1	2480.2
32.5°	2699.0	2676.2	2594.2	2384.4	2325.2
35°	2548.6	2530.3	2407.2	2224.9	2170.2
37.5°	2398.1	2375.3	2220.3	2074.4	2006.0
40°	2247.7	2220.3	2051.6	1919.4	1846.5
42.5°	2106.3	2069.9	1905.7	1764.4	1682.3
45°	1955.9	1914.8	1750.7	1604.8	1541.0
47.5°	1805.4	1769.0	1618.5	1468.0	1395.1
50°	1645.9	1613.9	1477.2	1326.7	1249.2
52.5°	1513.6	1463.5	1331.3	1180.8	1117.0
55°	1358.6	1317.6	1194.5	1053.2	998.5
57.5°	1217.3	1176.3	1062.3	930.1	884.5
60°	1085.1	1025.8	930.1	816.1	779.6
62.5°	939.2	893.6	811.5	715.8	761.4
65°	807.0	761.4	688.4	702.1	583.6
67.5°	661.1	638.3	574.5	510.6	492.4
70°	538.0	510.6	487.8	419.4	401.2
72.5°	428.6	401.2	369.3	332.8	319.1
75°	323.7	300.9	282.7	269.0	296.3
77.5°	223.4	214.3	200.6	186.9	182.4
80°	145.9	141.3	136.8	132.2	127.7
82.5°	86.6	86.6	86.6	86.6	86.6
85°	45.6	50.2	54.7	59.3	63.8
87.5°	27.4	27.4	31.9	36.5	41.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)