

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: P563366

Luminaire Tested: FSR-24-4-LD4-3LO-40-UNV-93-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563366
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-93-87-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6970.0 lumens
Efficiency: N/A
Efficacy: 99.3 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

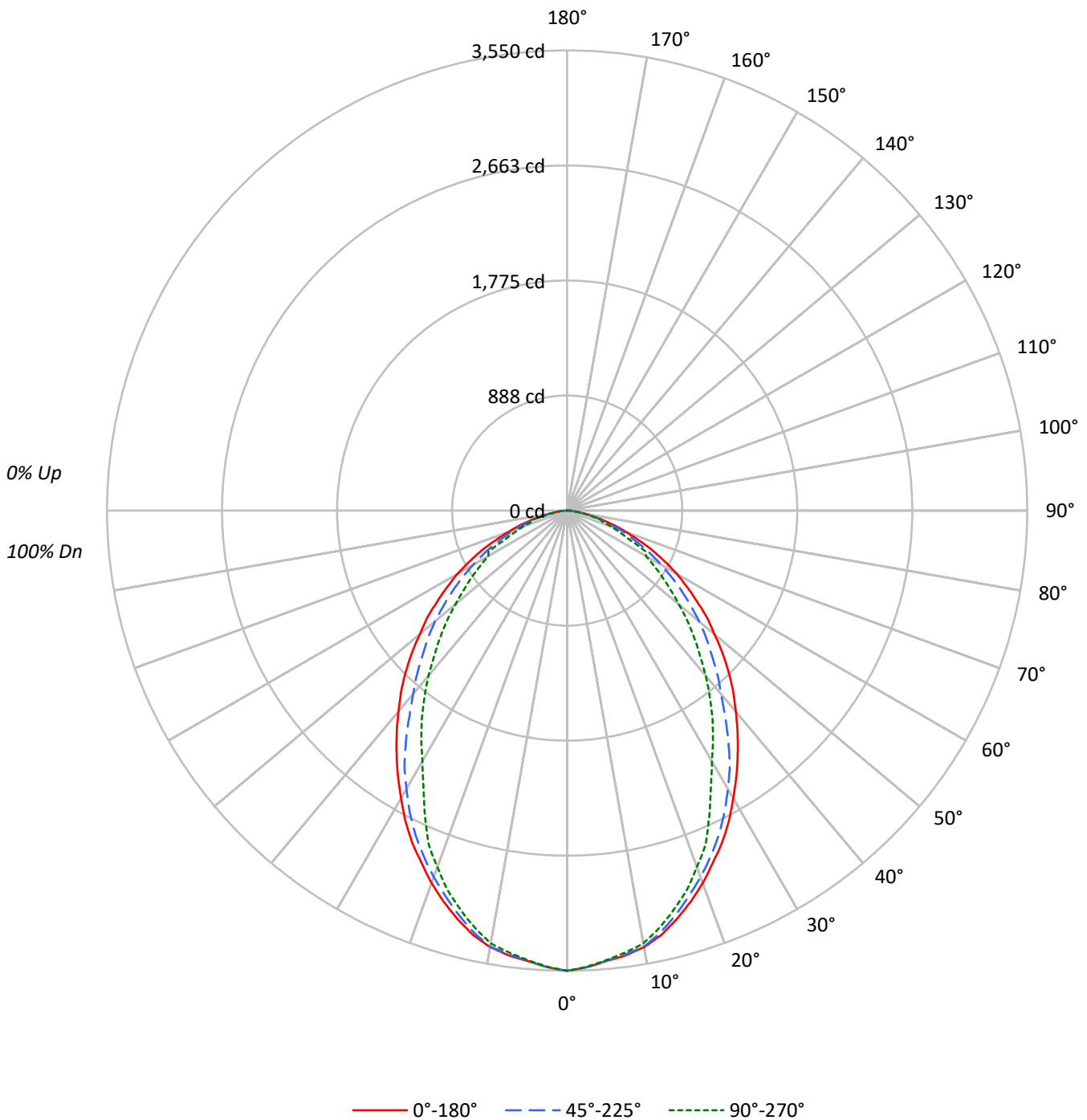
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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					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°	4777	4777	4777
5°	4712	4707	4701
10°	4671	4666	4632
15°	4545	4500	4437
20°	4378	4308	4190
25°	4198	4107	3851
30°	3979	3852	3469
35°	3769	3560	3209
40°	3554	3244	2920
45°	3350	2999	2640
50°	3102	2784	2354
55°	2869	2523	2109
60°	2629	2253	1889
65°	2313	1973	1673
70°	1905	1728	1421
75°	1515	1323	1387
80°	1017	954	890
85°	633	761	888

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3350 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	330.5	4.7
10°-20°	907.0	13.0
20°-30°	1255.7	18.0
30°-40°	1339.0	19.2
40°-50°	1221.5	17.5
50°-60°	957.0	13.7
60°-70°	623.7	8.9
70°-80°	276.3	4.0
80°-90°	59.3	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°	2493.2	35.8
0°-40°	3832.2	55.0
0°-60°	6010.6	86.2
0°-90°	6970.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6970.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3550	3550	3550	3550	3550	
5°	3489	3485	3485	3481	3481	331
15°	3263	3263	3230	3197	3185	917
25°	2828	2812	2766	2668	2594	1298
35°	2294	2278	2167	2003	1954	1434
45°	1761	1724	1576	1445	1387	1356
55°	1223	1186	1075	948	899	1097
65°	726	686	620	632	525	716
75°	291	271	254	242	267	312
85°	41	45	49	53	58	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3550.4	3550.4	3550.4	3550.4	3550.4
2.5°	3525.8	3525.8	3525.8	3521.7	3521.7
5°	3488.9	3484.8	3484.8	3480.6	3480.6
7.5°	3460.1	3456.0	3451.9	3447.8	3439.6
10°	3419.1	3419.1	3415.0	3394.5	3390.3
12.5°	3353.4	3349.3	3332.9	3304.2	3295.9
15°	3263.1	3263.1	3230.3	3197.4	3185.1
17.5°	3164.6	3160.5	3119.4	3086.6	3070.2
20°	3057.9	3049.7	3008.6	2955.3	2926.5
22.5°	2938.8	2938.8	2889.6	2819.8	2791.1
25°	2828.0	2811.6	2766.5	2667.9	2594.1
27.5°	2700.8	2676.2	2626.9	2487.3	2401.2
30°	2561.2	2548.9	2479.1	2298.5	2232.9
32.5°	2429.9	2409.4	2335.5	2146.7	2093.3
35°	2294.4	2278.0	2167.2	2003.0	1953.8
37.5°	2159.0	2138.5	1998.9	1867.6	1806.0
40°	2023.5	1998.9	1847.0	1728.0	1662.3
42.5°	1896.3	1863.5	1715.7	1588.5	1514.6
45°	1760.8	1723.9	1576.1	1444.8	1387.3
47.5°	1625.4	1592.6	1457.1	1321.7	1256.0
50°	1481.7	1453.0	1329.9	1194.4	1124.6
52.5°	1362.7	1317.6	1198.5	1063.1	1005.6
55°	1223.2	1186.2	1075.4	948.1	898.9
57.5°	1095.9	1059.0	956.4	837.3	796.3
60°	976.9	923.5	837.3	734.7	701.9
62.5°	845.5	804.5	730.6	644.4	685.5
65°	726.5	685.5	619.8	632.1	525.4
67.5°	595.2	574.6	517.2	459.7	443.3
70°	484.3	459.7	439.2	377.6	361.2
72.5°	385.8	361.2	332.5	299.6	287.3
75°	291.4	270.9	254.5	242.2	266.8
77.5°	201.1	192.9	180.6	168.3	164.2
80°	131.3	127.2	123.1	119.0	114.9
82.5°	78.0	78.0	78.0	78.0	78.0
85°	41.0	45.1	49.3	53.4	57.5
87.5°	24.6	24.6	28.7	32.8	36.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)