

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: P562928

Luminaire Tested: FSR-24-4-LD4-2STD-40-UNV-80-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562928
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-80-84-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6623.0 lumens
Efficiency: N/A
Efficacy: 99.4 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

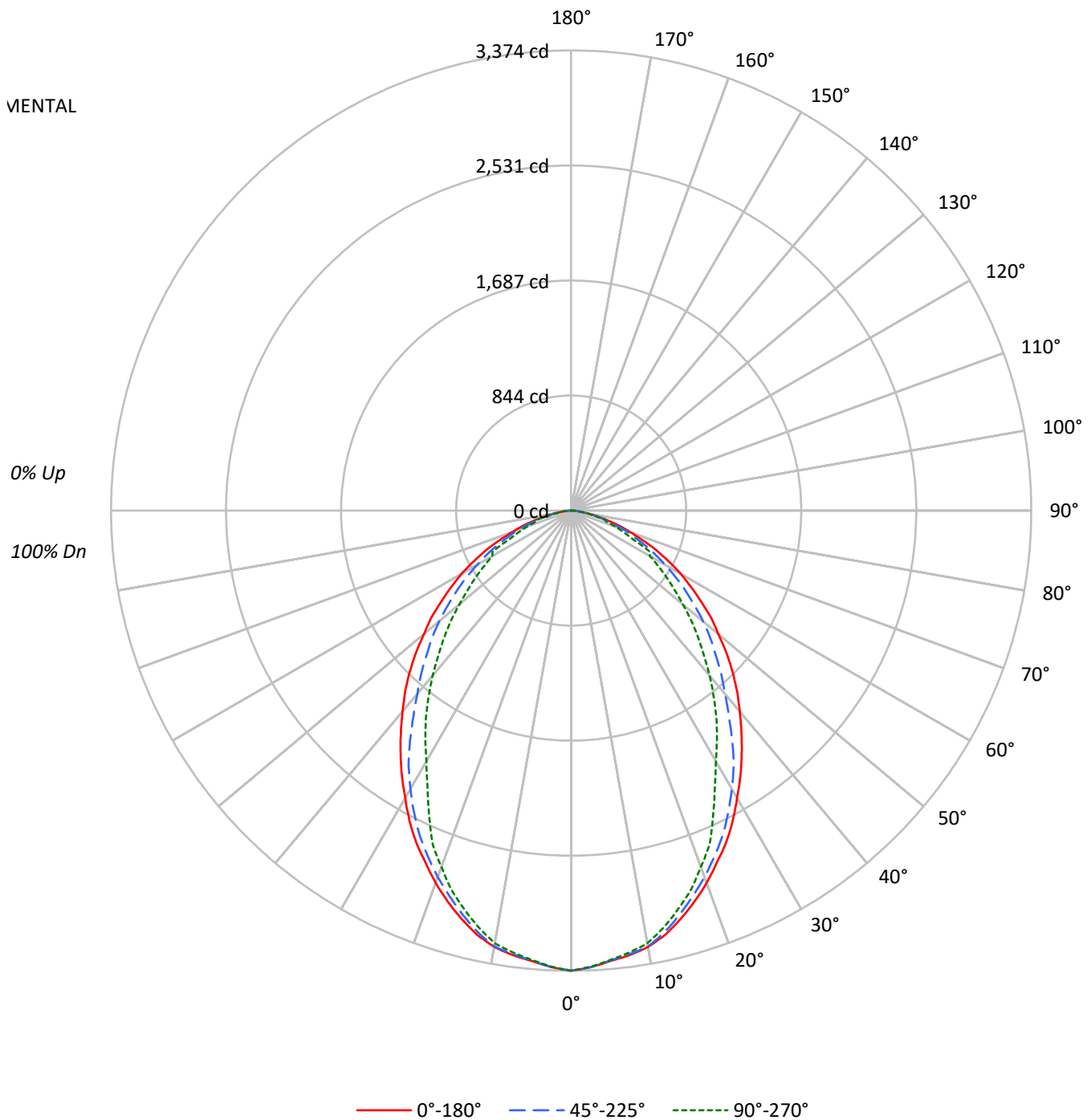
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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					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°	4539	4539	4539
5°	4478	4472	4467
10°	4439	4433	4401
15°	4319	4276	4216
20°	4160	4093	3982
25°	3989	3903	3659
30°	3781	3660	3296
35°	3581	3382	3049
40°	3377	3083	2774
45°	3184	2850	2508
50°	2947	2645	2237
55°	2727	2397	2004
60°	2498	2141	1795
65°	2198	1875	1589
70°	1810	1642	1350
75°	1439	1257	1318
80°	967	907	846
85°	602	722	843

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3184 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	314.0	4.7
10°-20°	861.9	13.0
20°-30°	1193.2	18.0
30°-40°	1272.3	19.2
40°-50°	1160.7	17.5
50°-60°	909.3	13.7
60°-70°	592.6	8.9
70°-80°	262.6	4.0
80°-90°	56.4	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°	2369.1	35.8
0°-40°	3641.4	55.0
0°-60°	5711.4	86.2
0°-90°	6623.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6623.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3374	3374	3374	3374	3374	
5°	3315	3311	3311	3307	3307	315
15°	3101	3101	3070	3038	3027	872
25°	2687	2672	2629	2535	2465	1234
35°	2180	2165	2059	1903	1856	1363
45°	1673	1638	1498	1373	1318	1289
55°	1162	1127	1022	901	854	1042
65°	690	651	589	601	499	680
75°	277	257	242	230	254	297
85°	39	43	47	51	55	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3373.7	3373.7	3373.7	3373.7	3373.7
2.5°	3350.3	3350.3	3350.3	3346.4	3346.4
5°	3315.2	3311.3	3311.3	3307.4	3307.4
7.5°	3287.9	3284.0	3280.1	3276.2	3268.4
10°	3248.9	3248.9	3245.0	3225.5	3221.6
12.5°	3186.5	3182.6	3167.0	3139.7	3131.9
15°	3100.7	3100.7	3069.5	3038.3	3026.6
17.5°	3007.0	3003.1	2964.1	2932.9	2917.3
20°	2905.6	2897.8	2858.8	2808.1	2780.8
22.5°	2792.5	2792.5	2745.7	2679.4	2652.1
25°	2687.2	2671.6	2628.7	2535.1	2464.9
27.5°	2566.3	2542.9	2496.1	2363.5	2281.6
30°	2433.7	2422.0	2355.7	2184.1	2121.7
32.5°	2308.9	2289.4	2219.2	2039.8	1989.1
35°	2180.2	2164.6	2059.3	1903.3	1856.5
37.5°	2051.5	2032.0	1899.4	1774.6	1716.1
40°	1922.8	1899.4	1755.1	1642.0	1579.6
42.5°	1801.9	1770.7	1630.3	1509.4	1439.2
45°	1673.2	1638.1	1497.7	1372.9	1318.3
47.5°	1544.5	1513.3	1384.6	1255.9	1193.5
50°	1408.0	1380.7	1263.7	1135.0	1068.7
52.5°	1294.9	1252.0	1138.9	1010.2	955.5
55°	1162.3	1127.2	1021.9	900.9	854.1
57.5°	1041.4	1006.3	908.7	795.6	756.6
60°	928.2	877.5	795.6	698.1	666.9
62.5°	803.4	764.4	694.2	612.3	651.3
65°	690.3	651.3	588.9	600.6	499.2
67.5°	565.5	546.0	491.4	436.8	421.2
70°	460.2	436.8	417.3	358.8	343.2
72.5°	366.6	343.2	315.9	284.7	273.0
75°	276.9	257.4	241.8	230.1	253.5
77.5°	191.1	183.3	171.6	159.9	156.0
80°	124.8	120.9	117.0	113.1	109.2
82.5°	74.1	74.1	74.1	74.1	74.1
85°	39.0	42.9	46.8	50.7	54.6
87.5°	23.4	23.4	27.3	31.2	35.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)