

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: P562971

Luminaire Tested: FSR-24-4-LD4-2STD-40-UNV-82-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562971
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-82-94-EDD
Description: 2X4 FSR TROFFER WITH .187 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: 7348.0 lumens
Efficiency: N/A
Efficacy: 110.3 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

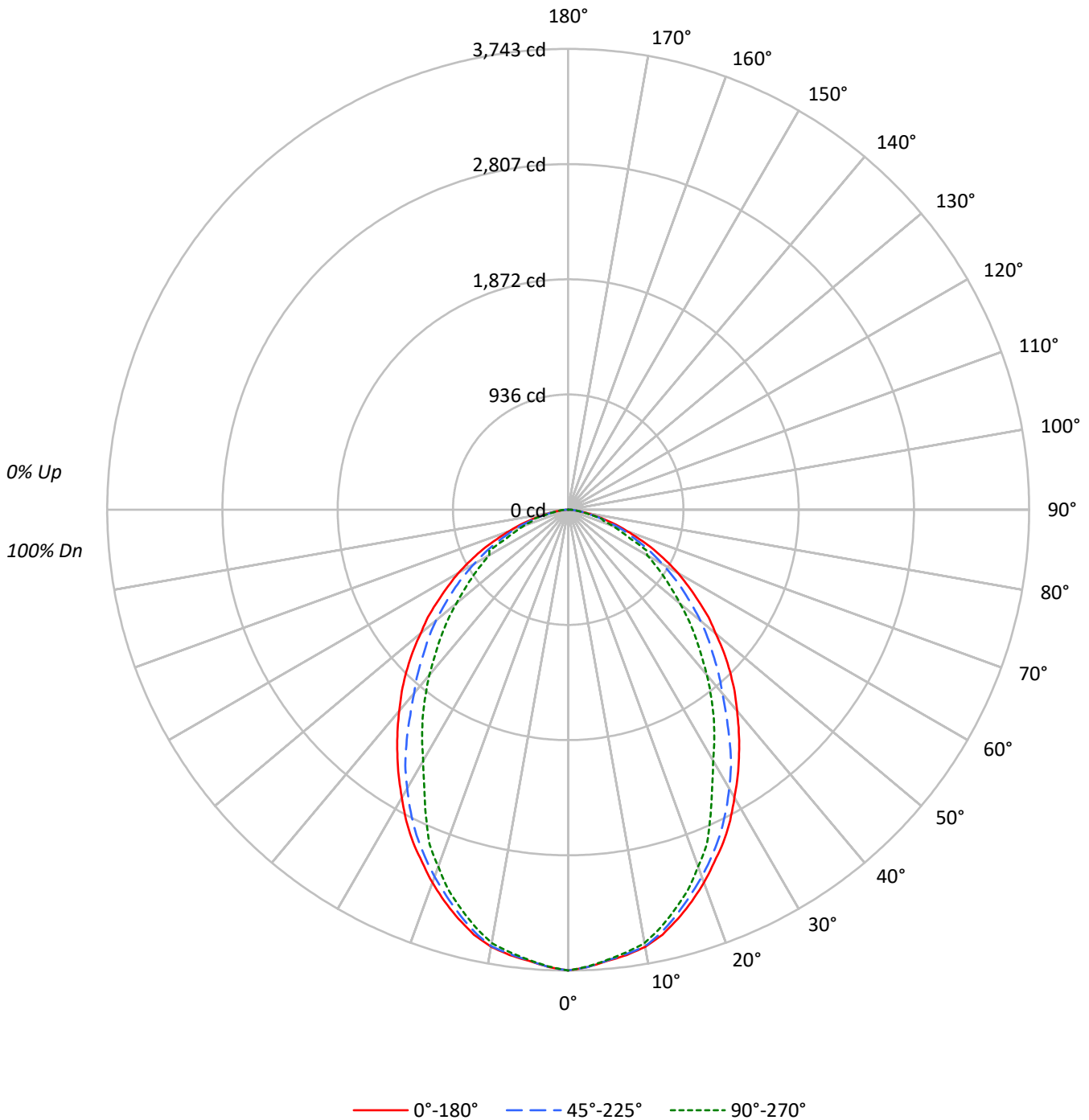
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5036	5036	5036
5°	4968	4962	4956
10°	4925	4919	4883
15°	4792	4744	4677
20°	4616	4542	4418
25°	4426	4330	4060
30°	4195	4061	3657
35°	3973	3753	3383
40°	3747	3420	3078
45°	3532	3162	2783
50°	3270	2935	2482
55°	3025	2659	2223
60°	2771	2375	1991
65°	2438	2080	1763
70°	2009	1821	1498
75°	1597	1395	1462
80°	1073	1006	939
85°	668	801	936

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3532 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	348.4	4.7
10°-20°	956.2	13.0
20°-30°	1323.8	18.0
30°-40°	1411.6	19.2
40°-50°	1287.7	17.5
50°-60°	1008.8	13.7
60°-70°	657.5	8.9
70°-80°	291.3	4.0
80°-90°	62.5	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°	2628.4	35.8
0°-40°	4040.0	55.0
0°-60°	6336.6	86.2
0°-90°	7348.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7348.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3743	3743	3743	3743	3743	
5°	3678	3674	3674	3669	3669	349
15°	3440	3440	3406	3371	3358	967
25°	2981	2964	2916	2813	2735	1369
35°	2419	2402	2285	2112	2060	1512
45°	1856	1817	1662	1523	1463	1430
55°	1290	1250	1134	1000	948	1157
65°	766	723	653	666	554	755
75°	307	286	268	255	281	329
85°	43	48	52	56	61	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3743.0	3743.0	3743.0	3743.0	3743.0
2.5°	3717.0	3717.0	3717.0	3712.7	3712.7
5°	3678.1	3673.7	3673.7	3669.4	3669.4
7.5°	3647.8	3643.4	3639.1	3634.8	3626.1
10°	3604.5	3604.5	3600.2	3578.5	3574.2
12.5°	3535.3	3530.9	3513.6	3483.3	3474.7
15°	3440.1	3440.1	3405.5	3370.8	3357.9
17.5°	3336.2	3331.9	3288.6	3254.0	3236.7
20°	3223.7	3215.1	3171.8	3115.5	3085.2
22.5°	3098.2	3098.2	3046.3	2972.7	2942.5
25°	2981.4	2964.1	2916.5	2812.6	2734.8
27.5°	2847.3	2821.3	2769.4	2622.2	2531.4
30°	2700.1	2687.2	2613.6	2423.2	2354.0
32.5°	2561.7	2540.0	2462.1	2263.1	2206.8
35°	2418.9	2401.6	2284.7	2111.6	2059.7
37.5°	2276.1	2254.4	2107.3	1968.8	1903.9
40°	2133.3	2107.3	1947.2	1821.7	1752.5
42.5°	1999.1	1964.5	1808.7	1674.6	1596.7
45°	1856.3	1817.4	1661.6	1523.2	1462.6
47.5°	1713.5	1678.9	1536.1	1393.3	1324.1
50°	1562.1	1531.8	1402.0	1259.2	1185.6
52.5°	1436.6	1389.0	1263.5	1120.7	1060.1
55°	1289.5	1250.5	1133.7	999.6	947.6
57.5°	1155.3	1116.4	1008.2	882.7	839.5
60°	1029.9	973.6	882.7	774.6	739.9
62.5°	891.4	848.1	770.2	679.4	722.6
65°	765.9	722.6	653.4	666.4	553.9
67.5°	627.4	605.8	545.2	484.6	467.3
70°	510.6	484.6	463.0	398.1	380.8
72.5°	406.8	380.8	350.5	315.9	302.9
75°	307.2	285.6	268.3	255.3	281.3
77.5°	212.0	203.4	190.4	177.4	173.1
80°	138.5	134.1	129.8	125.5	121.2
82.5°	82.2	82.2	82.2	82.2	82.2
85°	43.3	47.6	51.9	56.3	60.6
87.5°	26.0	26.0	30.3	34.6	38.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)