

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: P590768

Luminaire Tested: FSR-24-2-LD4-4HI-40-UNV-93-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590768
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-4HI-40-UNV-93-87-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9084.0 lumens
Efficiency: N/A
Efficacy: 105.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

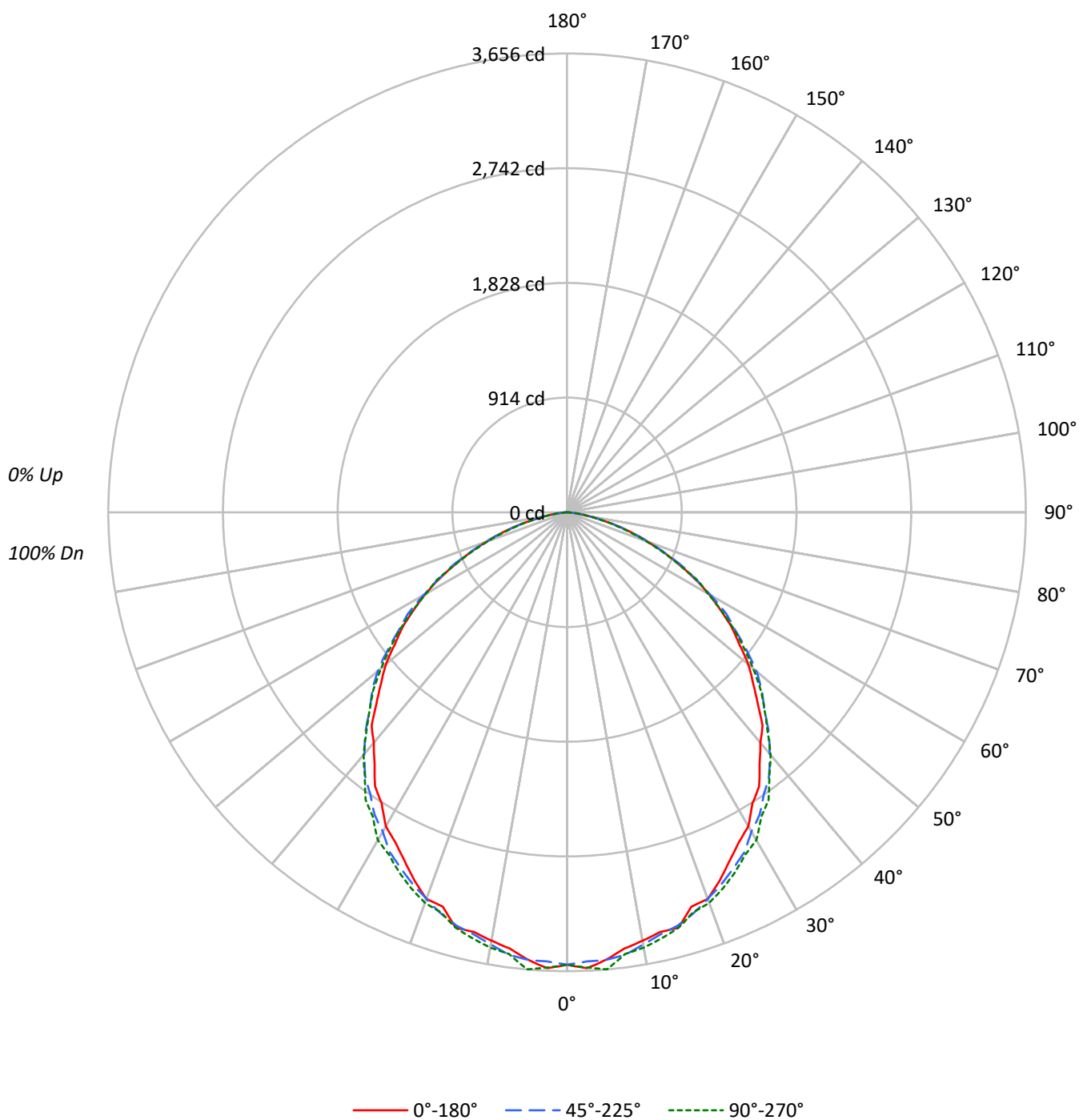
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	0
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86		86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73		73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62		62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53		53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46		46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41		41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36		36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32		32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29		29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26		26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9699	9699	9699
5°	9667	9671	9874
10°	9471	9554	9621
15°	9546	9494	9547
20°	9385	9385	9485
25°	9096	9295	9397
30°	8971	9129	9372
35°	8760	8989	9191
40°	8419	8825	8864
45°	8165	8455	8467
50°	7896	8253	8095
55°	7524	7670	7615
60°	7035	7106	6978
65°	6273	6433	6229
70°	5382	5401	5250
75°	4263	4253	4088
80°	2856	2777	2669
85°	1553	1538	1436

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°

Vertical Angle: 45°

Luminance: 8673 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	339.0	3.7
10°-20°	960.9	10.6
20°-30°	1439.6	15.8
30°-40°	1706.2	18.8
40°-50°	1709.4	18.8
50°-60°	1451.0	16.0
60°-70°	978.2	10.8
70°-80°	429.8	4.7
80°-90°	69.9	0.8
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°	2739.5	30.2
0°-40°	4445.7	48.9
0°-60°	7606.1	83.7
0°-90°	9084.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9084.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3604	3604	3604	3604	3604	
5°	3579	3570	3580	3569	3656	337
15°	3426	3387	3408	3426	3427	955
25°	3064	3080	3131	3172	3165	1416
35°	2667	2674	2736	2800	2798	1656
45°	2145	2185	2222	2279	2225	1660
55°	1604	1593	1635	1624	1623	1427
65°	985	972	1010	972	978	980
75°	410	402	409	380	393	439
85°	50	49	50	48	46	73
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3604.3	3604.3	3604.3	3604.3	3604.3
2.5°	3635.5	3608.0	3582.4	3612.2	3630.4
5°	3578.7	3570.3	3580.1	3569.4	3655.5
7.5°	3505.2	3537.3	3555.9	3544.3	3549.4
10°	3466.1	3454.9	3496.3	3525.2	3521.0
12.5°	3424.2	3441.0	3443.3	3474.5	3477.3
15°	3426.5	3387.0	3407.9	3425.6	3427.0
17.5°	3293.4	3336.2	3350.7	3391.2	3340.9
20°	3277.1	3246.0	3277.1	3318.6	3312.0
22.5°	3177.1	3142.2	3209.2	3246.0	3243.6
25°	3063.5	3080.3	3130.6	3171.5	3165.0
27.5°	2964.0	2983.5	3055.2	3111.5	3075.2
30°	2887.2	2877.4	2937.9	2988.1	3016.1
32.5°	2749.9	2785.2	2856.0	2905.8	2879.3
35°	2666.6	2674.5	2736.4	2799.7	2797.8
37.5°	2520.9	2557.7	2644.7	2662.4	2646.1
40°	2396.7	2433.4	2512.1	2531.2	2523.2
42.5°	2305.0	2311.5	2379.0	2400.9	2365.9
45°	2145.4	2185.4	2221.7	2278.9	2224.9
47.5°	2009.5	2028.1	2106.3	2121.6	2093.2
50°	1886.2	1892.7	1971.3	1952.2	1933.6
52.5°	1731.2	1758.6	1802.8	1799.1	1777.3
55°	1603.7	1593.0	1634.8	1623.7	1623.2
57.5°	1450.6	1469.2	1503.6	1485.9	1457.5
60°	1307.2	1307.7	1320.3	1300.2	1296.5
62.5°	1147.6	1153.2	1156.0	1131.3	1171.3
65°	985.2	972.2	1010.3	971.7	978.2
67.5°	835.8	842.3	838.6	814.4	823.7
70°	684.1	692.5	686.4	659.0	667.3
72.5°	545.4	535.2	541.7	507.3	523.1
75°	410.0	401.6	409.1	380.2	393.2
77.5°	279.2	285.7	281.1	265.7	274.6
80°	184.3	179.2	179.2	170.3	172.2
82.5°	107.5	102.4	101.0	98.2	102.4
85°	50.3	48.9	49.8	48.4	46.5
87.5°	18.1	18.6	18.6	17.7	16.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)