

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: P561372

Luminaire Tested: FSR-12-4-LD4-2HI-35-UNV-82-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561372
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-12-4-LD4-2HI-35-UNV-82-96-EDD-90
Description: 1X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6285.0 lumens
Efficiency: N/A
Efficacy: 72.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

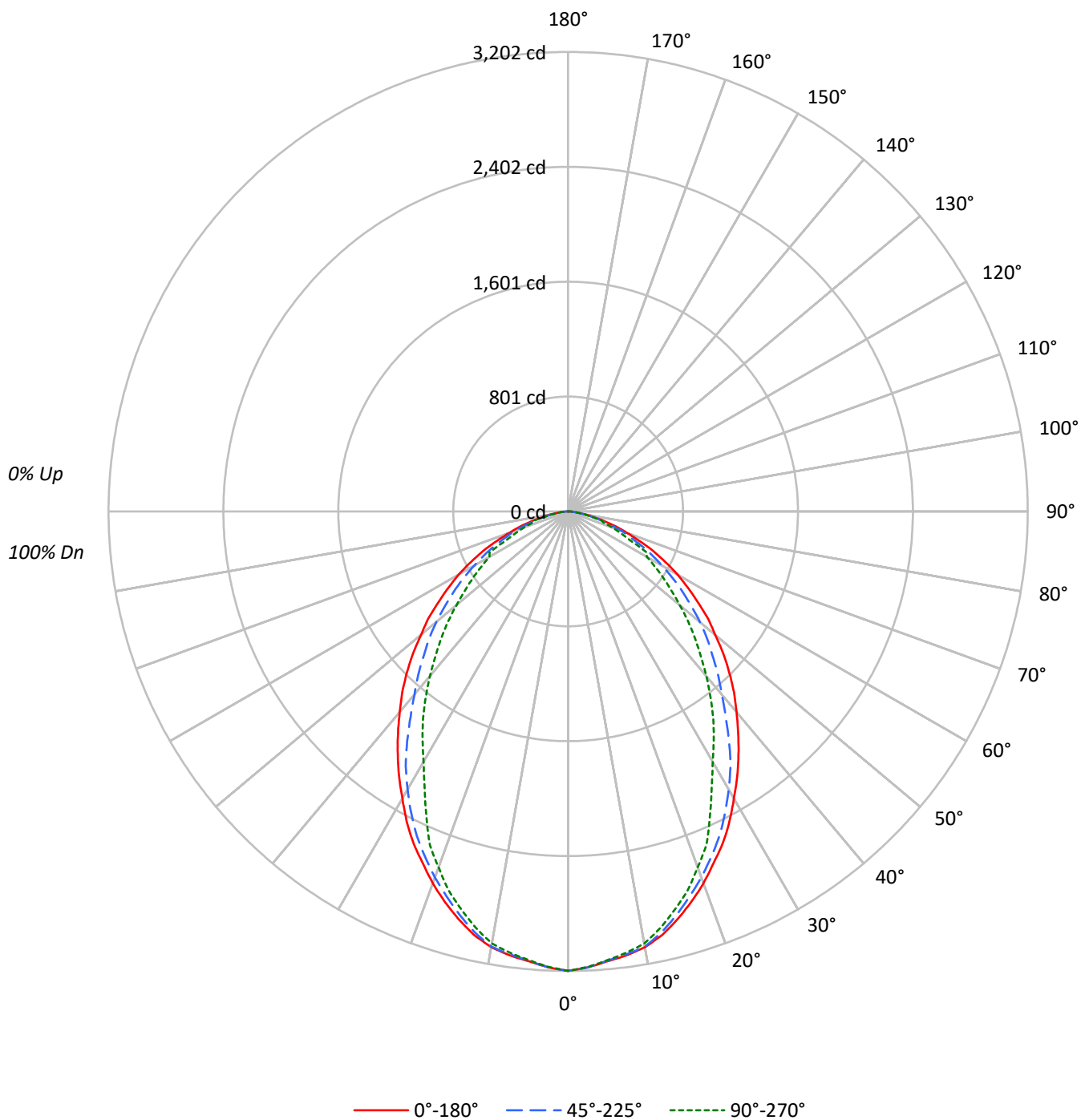
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					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°	8615	8615	8615
5°	8498	8488	8478
10°	8425	8414	8354
15°	8197	8115	8001
20°	7896	7769	7557
25°	7572	7407	6945
30°	7176	6946	6256
35°	6796	6420	5787
40°	6410	5851	5266
45°	6043	5409	4761
50°	5593	5020	4245
55°	5174	4549	3803
60°	4741	4063	3406
65°	4171	3559	3016
70°	3436	3116	2563
75°	2732	2386	2502
80°	1835	1720	1605
85°	1142	1371	1599

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 6043 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	298.0	4.7
10°-20°	817.9	13.0
20°-30°	1132.3	18.0
30°-40°	1207.4	19.2
40°-50°	1101.5	17.5
50°-60°	862.9	13.7
60°-70°	562.4	8.9
70°-80°	249.2	4.0
80°-90°	53.5	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°	2248.2	35.8
0°-40°	3455.6	55.0
0°-60°	5419.9	86.2
0°-90°	6285.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6285.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3202	3202	3202	3202	3202	
5°	3146	3142	3142	3139	3139	299
15°	2942	2942	2913	2883	2872	827
25°	2550	2535	2495	2406	2339	1171
35°	2069	2054	1954	1806	1762	1293
45°	1588	1554	1421	1303	1251	1223
55°	1103	1070	970	855	811	989
65°	655	618	559	570	474	646
75°	263	244	230	218	241	282
85°	37	41	44	48	52	51
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3201.5	3201.5	3201.5	3201.5	3201.5
2.5°	3179.3	3179.3	3179.3	3175.6	3175.6
5°	3146.0	3142.3	3142.3	3138.6	3138.6
7.5°	3120.1	3116.4	3112.7	3109.0	3101.6
10°	3083.1	3083.1	3079.4	3060.9	3057.2
12.5°	3023.8	3020.1	3005.3	2979.4	2972.0
15°	2942.4	2942.4	2912.8	2883.2	2872.1
17.5°	2853.6	2849.9	2812.9	2783.3	2768.5
20°	2757.4	2750.0	2712.9	2664.8	2638.9
22.5°	2650.0	2650.0	2605.6	2542.7	2516.8
25°	2550.1	2535.3	2494.6	2405.7	2339.1
27.5°	2435.4	2413.2	2368.7	2242.9	2165.2
30°	2309.5	2298.4	2235.5	2072.6	2013.4
32.5°	2191.1	2172.6	2106.0	1935.7	1887.6
35°	2068.9	2054.1	1954.2	1806.2	1761.7
37.5°	1946.8	1928.3	1802.5	1684.0	1628.5
40°	1824.7	1802.5	1665.5	1558.2	1499.0
42.5°	1709.9	1680.3	1547.1	1432.3	1365.7
45°	1587.8	1554.5	1421.2	1302.8	1251.0
47.5°	1465.7	1436.0	1313.9	1191.8	1132.6
50°	1336.1	1310.2	1199.2	1077.0	1014.1
52.5°	1228.8	1188.1	1080.7	958.6	906.8
55°	1102.9	1069.6	969.7	855.0	810.6
57.5°	988.2	954.9	862.4	755.0	718.0
60°	880.9	832.8	755.0	662.5	632.9
62.5°	762.4	725.4	658.8	581.1	618.1
65°	655.1	618.1	558.9	570.0	473.7
67.5°	536.7	518.2	466.3	414.5	399.7
70°	436.7	414.5	396.0	340.5	325.7
72.5°	347.9	325.7	299.8	270.2	259.1
75°	262.8	244.3	229.5	218.4	240.6
77.5°	181.4	174.0	162.9	151.7	148.0
80°	118.4	114.7	111.0	107.3	103.6
82.5°	70.3	70.3	70.3	70.3	70.3
85°	37.0	40.7	44.4	48.1	51.8
87.5°	22.2	22.2	25.9	29.6	33.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)