

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: P562944

Luminaire Tested: FSR-24-4-LD4-2STD-40-UNV-81-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562944
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-81-84-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6292.0 lumens
Efficiency: N/A
Efficacy: 94.5 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

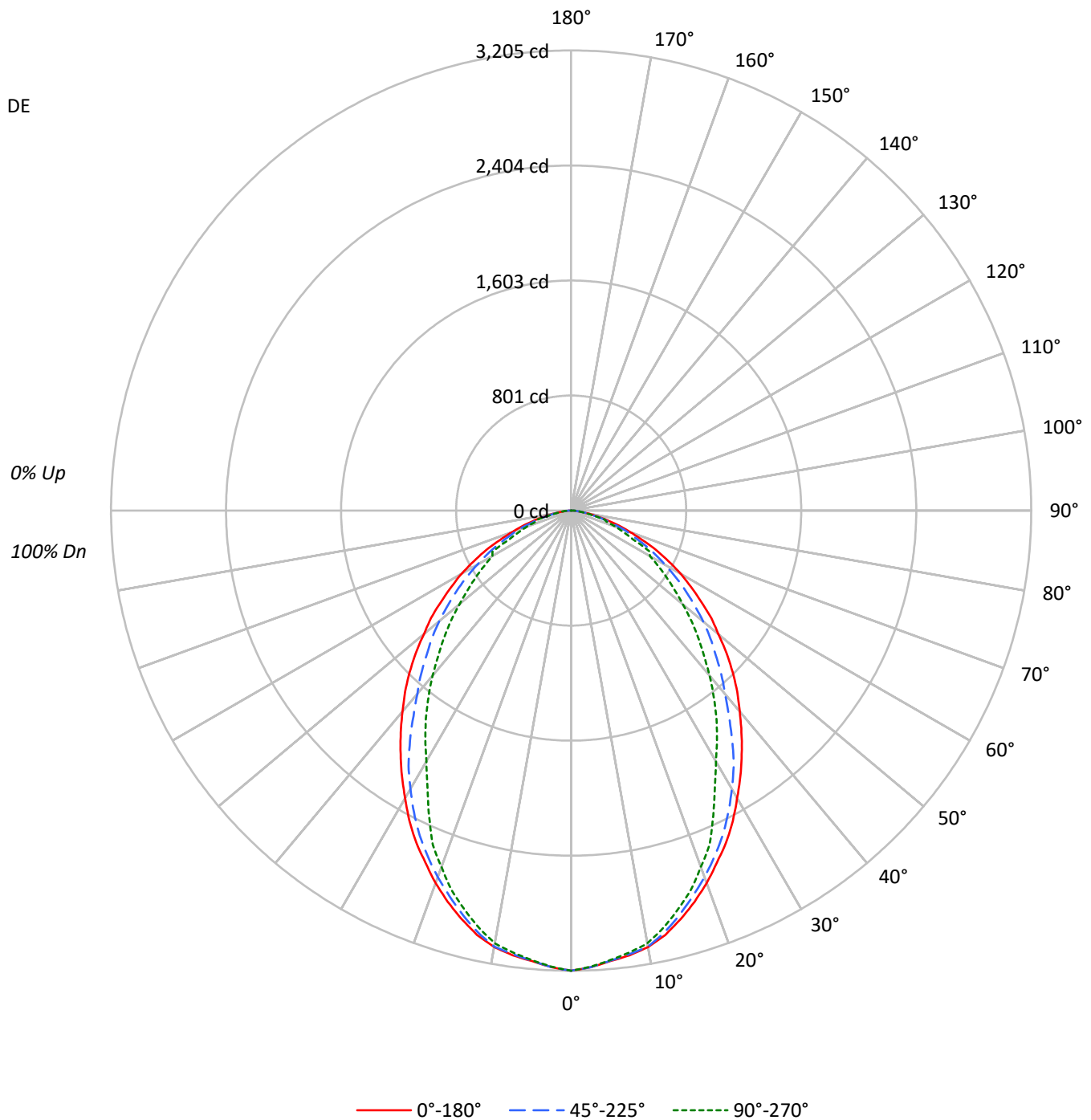
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4312	4312	4312
5°	4254	4249	4244
10°	4217	4212	4182
15°	4103	4062	4005
20°	3952	3889	3783
25°	3790	3708	3476
30°	3592	3477	3132
35°	3402	3213	2897
40°	3208	2929	2636
45°	3025	2707	2383
50°	2800	2513	2125
55°	2590	2277	1904
60°	2373	2034	1705
65°	2088	1781	1510
70°	1720	1560	1283
75°	1368	1194	1252
80°	919	862	804
85°	573	687	801

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3025 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	298.3	4.7
10°-20°	818.8	13.0
20°-30°	1133.6	18.0
30°-40°	1208.7	19.2
40°-50°	1102.7	17.5
50°-60°	863.9	13.7
60°-70°	563.0	8.9
70°-80°	249.4	4.0
80°-90°	53.6	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°	2250.7	35.8
0°-40°	3459.4	55.0
0°-60°	5426.0	86.2
0°-90°	6292.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6292.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3205	3205	3205	3205	3205	
5°	3150	3146	3146	3142	3142	299
15°	2946	2946	2916	2886	2875	828
25°	2553	2538	2497	2408	2342	1172
35°	2071	2056	1956	1808	1764	1295
45°	1590	1556	1423	1304	1252	1224
55°	1104	1071	971	856	812	990
65°	656	619	560	571	474	646
75°	263	244	230	219	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°	3205.1	3205.1	3205.1	3205.1	3205.1
2.5°	3182.8	3182.8	3182.8	3179.1	3179.1
5°	3149.5	3145.8	3145.8	3142.1	3142.1
7.5°	3123.5	3119.8	3116.1	3112.4	3105.0
10°	3086.5	3086.5	3082.8	3064.3	3060.6
12.5°	3027.2	3023.5	3008.7	2982.7	2975.3
15°	2945.7	2945.7	2916.0	2886.4	2875.3
17.5°	2856.8	2853.1	2816.0	2786.4	2771.5
20°	2760.4	2753.0	2716.0	2667.8	2641.9
22.5°	2653.0	2653.0	2608.5	2545.5	2519.6
25°	2552.9	2538.1	2497.4	2408.4	2341.7
27.5°	2438.1	2415.8	2371.4	2245.4	2167.6
30°	2312.1	2301.0	2238.0	2075.0	2015.7
32.5°	2193.5	2175.0	2108.3	1937.9	1889.7
35°	2071.2	2056.4	1956.4	1808.2	1763.7
37.5°	1949.0	1930.4	1804.5	1685.9	1630.3
40°	1826.7	1804.5	1667.4	1559.9	1500.6
42.5°	1711.8	1682.2	1548.8	1433.9	1367.2
45°	1589.6	1556.2	1422.8	1304.3	1252.4
47.5°	1467.3	1437.6	1315.4	1193.1	1133.8
50°	1337.6	1311.7	1200.5	1078.2	1015.2
52.5°	1230.2	1189.4	1081.9	959.7	907.8
55°	1104.2	1070.8	970.8	855.9	811.5
57.5°	989.3	956.0	863.3	755.9	718.8
60°	881.9	833.7	755.9	663.2	633.6
62.5°	763.3	726.2	659.5	581.7	618.8
65°	655.8	618.8	559.5	570.6	474.3
67.5°	537.3	518.7	466.9	415.0	400.2
70°	437.2	415.0	396.5	340.9	326.1
72.5°	348.3	326.1	300.1	270.5	259.4
75°	263.1	244.5	229.7	218.6	240.8
77.5°	181.6	174.1	163.0	151.9	148.2
80°	118.6	114.9	111.2	107.5	103.7
82.5°	70.4	70.4	70.4	70.4	70.4
85°	37.1	40.8	44.5	48.2	51.9
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)