

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: P562966

Luminaire Tested: FSR-24-4-LD4-2STD-40-UNV-82-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562966
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-82-87-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5776.0 lumens
Efficiency: N/A
Efficacy: 86.7 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

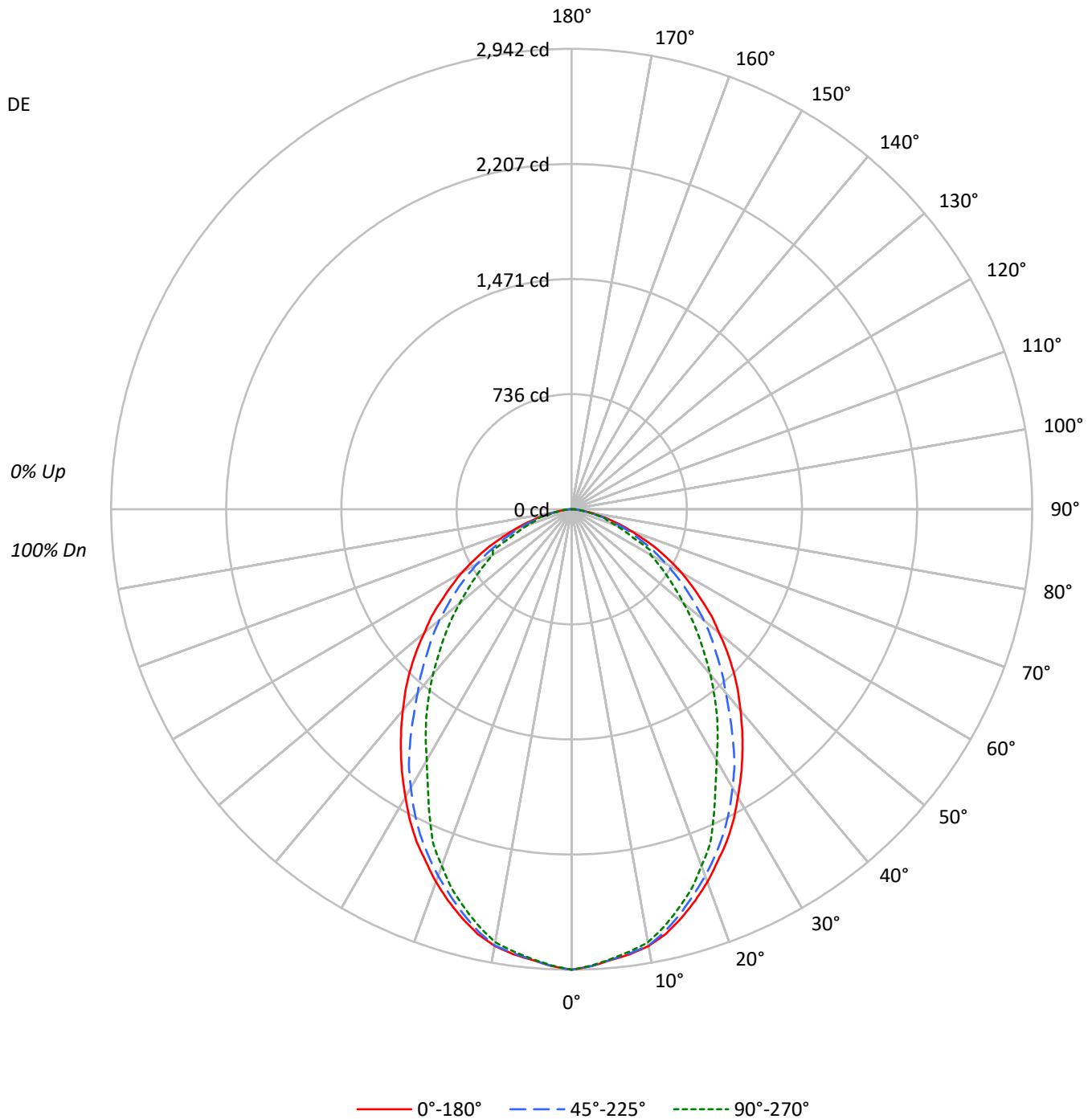
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3959	3959	3959
5°	3905	3900	3896
10°	3871	3866	3839
15°	3767	3729	3677
20°	3628	3570	3472
25°	3479	3403	3191
30°	3298	3192	2875
35°	3123	2950	2659
40°	2945	2688	2420
45°	2777	2485	2188
50°	2570	2307	1951
55°	2378	2091	1747
60°	2178	1867	1565
65°	1917	1635	1386
70°	1579	1432	1177
75°	1255	1096	1149
80°	843	790	738
85°	525	630	735

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2777 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	273.9	4.7
10°-20°	751.6	13.0
20°-30°	1040.6	18.0
30°-40°	1109.6	19.2
40°-50°	1012.3	17.5
50°-60°	793.0	13.7
60°-70°	516.9	8.9
70°-80°	229.0	4.0
80°-90°	49.1	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°	2066.1	35.8
0°-40°	3175.7	55.0
0°-60°	4981.0	86.2
0°-90°	5776.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5776.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2942	2942	2942	2942	2942	
5°	2891	2888	2888	2884	2884	274
15°	2704	2704	2677	2650	2640	760
25°	2344	2330	2292	2211	2150	1076
35°	1901	1888	1796	1660	1619	1189
45°	1459	1429	1306	1197	1150	1124
55°	1014	983	891	786	745	909
65°	602	568	514	524	435	593
75°	242	224	211	201	221	259
85°	34	37	41	44	48	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2942.2	2942.2	2942.2	2942.2	2942.2
2.5°	2921.8	2921.8	2921.8	2918.4	2918.4
5°	2891.2	2887.8	2887.8	2884.4	2884.4
7.5°	2867.4	2864.0	2860.6	2857.2	2850.4
10°	2833.4	2833.4	2830.0	2813.0	2809.6
12.5°	2778.9	2775.5	2761.9	2738.1	2731.3
15°	2704.1	2704.1	2676.9	2649.7	2639.5
17.5°	2622.5	2619.1	2585.1	2557.9	2544.3
20°	2534.0	2527.2	2493.2	2449.0	2425.2
22.5°	2435.4	2435.4	2394.6	2336.8	2313.0
25°	2343.6	2330.0	2292.5	2210.9	2149.7
27.5°	2238.1	2217.7	2176.9	2061.3	1989.8
30°	2122.5	2112.3	2054.4	1904.8	1850.4
32.5°	2013.6	1996.6	1935.4	1778.9	1734.7
35°	1901.4	1887.8	1795.9	1659.9	1619.1
37.5°	1789.1	1772.1	1656.5	1547.6	1496.6
40°	1676.9	1656.5	1530.6	1432.0	1377.6
42.5°	1571.5	1544.2	1421.8	1316.3	1255.1
45°	1459.2	1428.6	1306.1	1197.3	1149.7
47.5°	1347.0	1319.7	1207.5	1095.3	1040.8
50°	1227.9	1204.1	1102.1	989.8	932.0
52.5°	1129.3	1091.9	993.2	881.0	833.3
55°	1013.6	983.0	891.2	785.7	744.9
57.5°	908.2	877.6	792.5	693.9	659.9
60°	809.5	765.3	693.9	608.9	581.6
62.5°	700.7	666.7	605.5	534.0	568.0
65°	602.0	568.0	513.6	523.8	435.4
67.5°	493.2	476.2	428.6	381.0	367.4
70°	401.4	381.0	364.0	312.9	299.3
72.5°	319.7	299.3	275.5	248.3	238.1
75°	241.5	224.5	210.9	200.7	221.1
77.5°	166.7	159.9	149.7	139.5	136.1
80°	108.8	105.4	102.0	98.6	95.2
82.5°	64.6	64.6	64.6	64.6	64.6
85°	34.0	37.4	40.8	44.2	47.6
87.5°	20.4	20.4	23.8	27.2	30.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)