

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: P562954

Luminaire Tested: FSR-24-4-LD4-2STD-40-UNV-81-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562954
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-81-94-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6307.0 lumens
Efficiency: N/A
Efficacy: 94.7 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

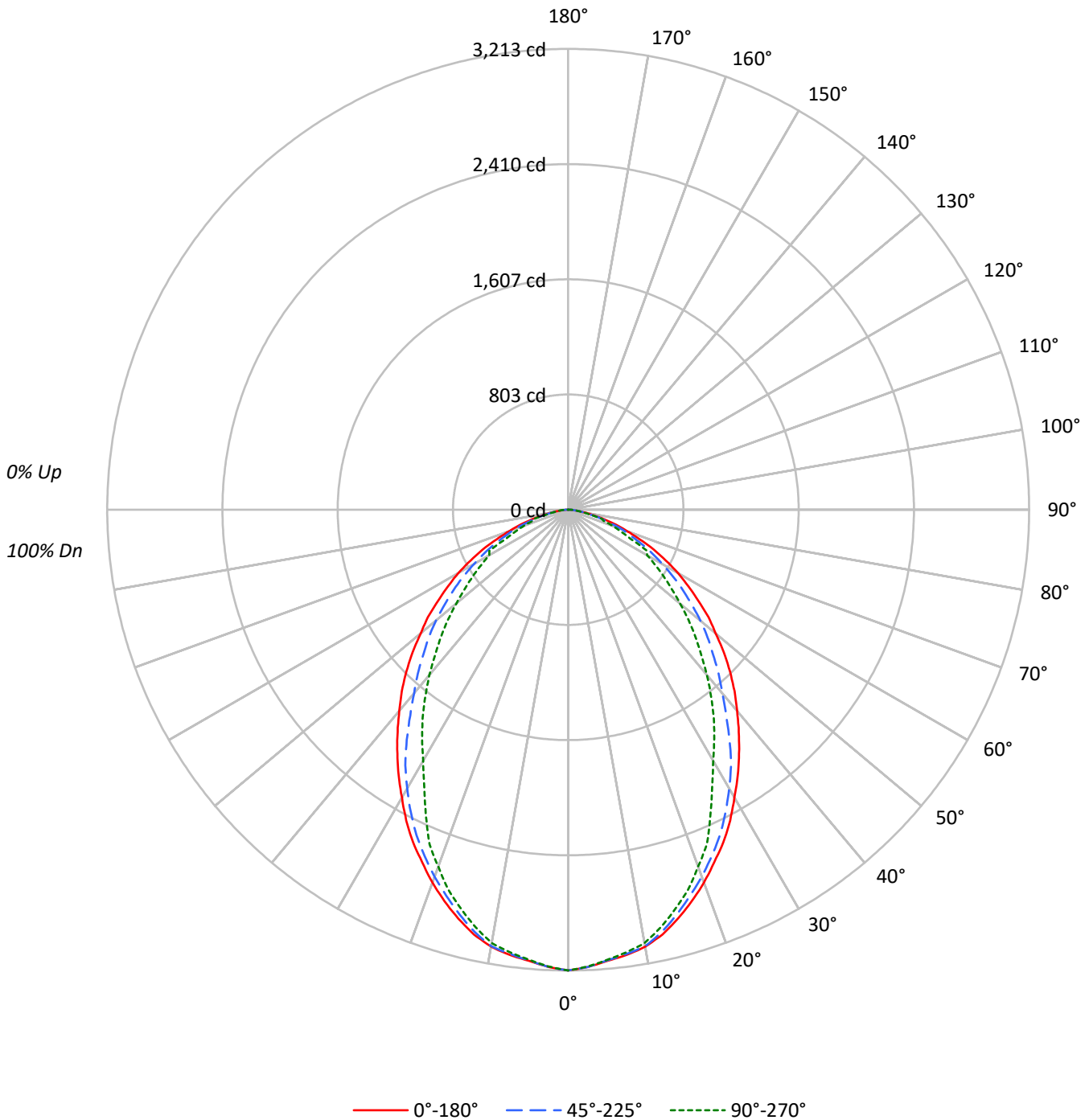
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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				
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°	4323	4323	4323
5°	4264	4259	4254
10°	4227	4222	4192
15°	4113	4072	4015
20°	3962	3898	3792
25°	3799	3716	3485
30°	3601	3485	3139
35°	3410	3221	2904
40°	3216	2935	2642
45°	3032	2714	2389
50°	2807	2519	2130
55°	2596	2283	1908
60°	2379	2039	1709
65°	2093	1785	1514
70°	1724	1563	1286
75°	1371	1197	1255
80°	921	863	806
85°	573	689	803

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3032 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	299.1	4.7
10°-20°	820.7	13.0
20°-30°	1136.3	18.0
30°-40°	1211.6	19.2
40°-50°	1105.3	17.5
50°-60°	865.9	13.7
60°-70°	564.4	8.9
70°-80°	250.0	4.0
80°-90°	53.7	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°	2256.1	35.8
0°-40°	3467.7	55.0
0°-60°	5438.9	86.2
0°-90°	6307.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6307.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3213	3213	3213	3213	3213	
5°	3157	3153	3153	3150	3150	300
15°	2953	2953	2923	2893	2882	830
25°	2559	2544	2503	2414	2347	1175
35°	2076	2061	1961	1812	1768	1298
45°	1593	1560	1426	1307	1255	1227
55°	1107	1073	973	858	813	993
65°	657	620	561	572	475	648
75°	264	245	230	219	241	283
85°	37	41	45	48	52	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3212.7	3212.7	3212.7	3212.7	3212.7
2.5°	3190.4	3190.4	3190.4	3186.7	3186.7
5°	3157.0	3153.3	3153.3	3149.6	3149.6
7.5°	3131.0	3127.3	3123.6	3119.8	3112.4
10°	3093.9	3093.9	3090.1	3071.6	3067.9
12.5°	3034.4	3030.7	3015.9	2989.9	2982.4
15°	2952.7	2952.7	2923.0	2893.3	2882.1
17.5°	2863.6	2859.9	2822.7	2793.0	2778.2
20°	2767.0	2759.6	2722.4	2674.2	2648.2
22.5°	2659.3	2659.3	2614.7	2551.6	2525.6
25°	2559.0	2544.2	2503.3	2414.2	2347.3
27.5°	2443.9	2421.6	2377.0	2250.7	2172.8
30°	2317.6	2306.5	2243.3	2079.9	2020.5
32.5°	2198.8	2180.2	2113.3	1942.5	1894.2
35°	2076.2	2061.3	1961.0	1812.5	1767.9
37.5°	1953.6	1935.0	1808.8	1689.9	1634.2
40°	1831.1	1808.8	1671.3	1563.6	1504.2
42.5°	1715.9	1686.2	1552.5	1437.4	1370.5
45°	1593.4	1559.9	1426.2	1307.4	1255.4
47.5°	1470.8	1441.1	1318.5	1195.9	1136.5
50°	1340.8	1314.8	1203.4	1080.8	1017.7
52.5°	1233.1	1192.2	1084.5	962.0	910.0
55°	1106.8	1073.4	973.1	858.0	813.4
57.5°	991.7	958.2	865.4	757.7	720.5
60°	884.0	835.7	757.7	664.8	635.1
62.5°	765.1	728.0	661.1	583.1	620.3
65°	657.4	620.3	560.8	572.0	475.4
67.5°	538.5	520.0	468.0	416.0	401.1
70°	438.3	416.0	397.4	341.7	326.8
72.5°	349.1	326.8	300.8	271.1	260.0
75°	263.7	245.1	230.3	219.1	241.4
77.5°	182.0	174.6	163.4	152.3	148.6
80°	118.9	115.1	111.4	107.7	104.0
82.5°	70.6	70.6	70.6	70.6	70.6
85°	37.1	40.9	44.6	48.3	52.0
87.5°	22.3	22.3	26.0	29.7	33.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)