

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: P562935

Luminaire Tested: FSR-24-4-LD4-2STD-40-UNV-80-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562935
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-80-87-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONM
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

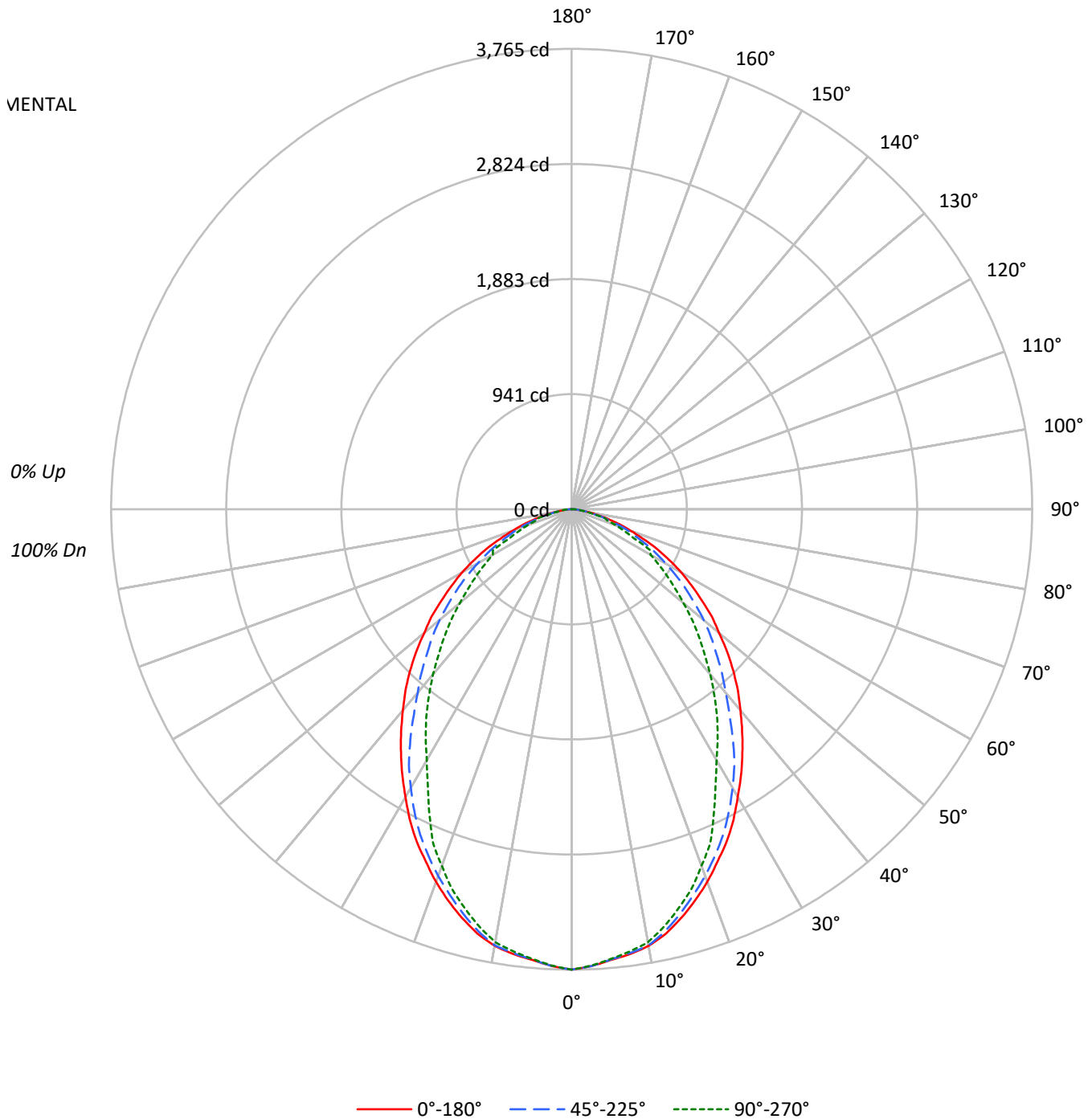
Lumens per Lamp: N/A
Luminaire Lumens: 7391.0 lumens
Efficiency: N/A
Efficacy: 111.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	5066	5066	5066
5°	4997	4991	4985
10°	4953	4947	4912
15°	4820	4771	4705
20°	4643	4568	4443
25°	4452	4355	4084
30°	4220	4084	3679
35°	3996	3775	3403
40°	3769	3440	3096
45°	3553	3180	2799
50°	3289	2952	2496
55°	3042	2675	2236
60°	2788	2389	2003
65°	2453	2092	1774
70°	2020	1832	1507
75°	1606	1403	1471
80°	1079	1012	945
85°	672	806	940

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3553 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	350.5	4.7
10°-20°	961.8	13.0
20°-30°	1331.6	18.0
30°-40°	1419.8	19.2
40°-50°	1295.3	17.5
50°-60°	1014.8	13.7
60°-70°	661.4	8.9
70°-80°	293.0	4.0
80°-90°	62.9	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°	2643.8	35.8
0°-40°	4063.6	55.0
0°-60°	6373.7	86.2
0°-90°	7391.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7391.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3765	3765	3765	3765	3765	
5°	3700	3695	3695	3691	3691	351
15°	3460	3460	3425	3391	3378	973
25°	2999	2981	2934	2829	2751	1377
35°	2433	2416	2298	2124	2072	1521
45°	1867	1828	1671	1532	1471	1438
55°	1297	1258	1140	1005	953	1163
65°	770	727	657	670	557	759
75°	309	287	270	257	283	331
85°	44	48	52	57	61	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3764.9	3764.9	3764.9	3764.9	3764.9
2.5°	3738.8	3738.8	3738.8	3734.4	3734.4
5°	3699.6	3695.2	3695.2	3690.9	3690.9
7.5°	3669.1	3664.8	3660.4	3656.1	3647.4
10°	3625.6	3625.6	3621.2	3599.5	3595.1
12.5°	3556.0	3551.6	3534.2	3503.7	3495.0
15°	3460.2	3460.2	3425.4	3390.6	3377.5
17.5°	3355.7	3351.4	3307.9	3273.0	3255.6
20°	3242.6	3233.9	3190.4	3133.8	3103.3
22.5°	3116.4	3116.4	3064.1	2990.1	2959.7
25°	2998.8	2981.4	2933.6	2829.1	2750.8
27.5°	2863.9	2837.8	2785.6	2637.6	2546.2
30°	2715.9	2702.9	2628.9	2437.4	2367.7
32.5°	2576.7	2554.9	2476.5	2276.3	2219.8
35°	2433.0	2415.6	2298.1	2124.0	2071.8
37.5°	2289.4	2267.6	2119.6	1980.4	1915.1
40°	2145.8	2119.6	1958.6	1832.4	1762.7
42.5°	2010.8	1976.0	1819.3	1684.4	1606.1
45°	1867.2	1828.0	1671.3	1532.1	1471.1
47.5°	1723.6	1688.8	1545.1	1401.5	1331.9
50°	1571.2	1540.8	1410.2	1266.6	1192.6
52.5°	1445.0	1397.1	1270.9	1127.3	1066.4
55°	1297.0	1257.9	1140.3	1005.4	953.2
57.5°	1162.1	1122.9	1014.1	887.9	844.4
60°	1035.9	979.3	887.9	779.1	744.3
62.5°	896.6	853.1	774.7	683.3	726.9
65°	770.4	726.9	657.2	670.3	557.1
67.5°	631.1	609.3	548.4	487.5	470.1
70°	513.6	487.5	465.7	400.4	383.0
72.5°	409.1	383.0	352.5	317.7	304.7
75°	309.0	287.3	269.9	256.8	282.9
77.5°	213.3	204.6	191.5	178.5	174.1
80°	139.3	134.9	130.6	126.2	121.9
82.5°	82.7	82.7	82.7	82.7	82.7
85°	43.5	47.9	52.2	56.6	60.9
87.5°	26.1	26.1	30.5	34.8	39.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)