

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: P561395

Luminaire Tested: FSR-12-4-LD4-2HI-40-UNV-80-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561395
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-40-UNV-80-85-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8065.9 lumens
Efficiency: N/A
Efficacy: 93.4 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

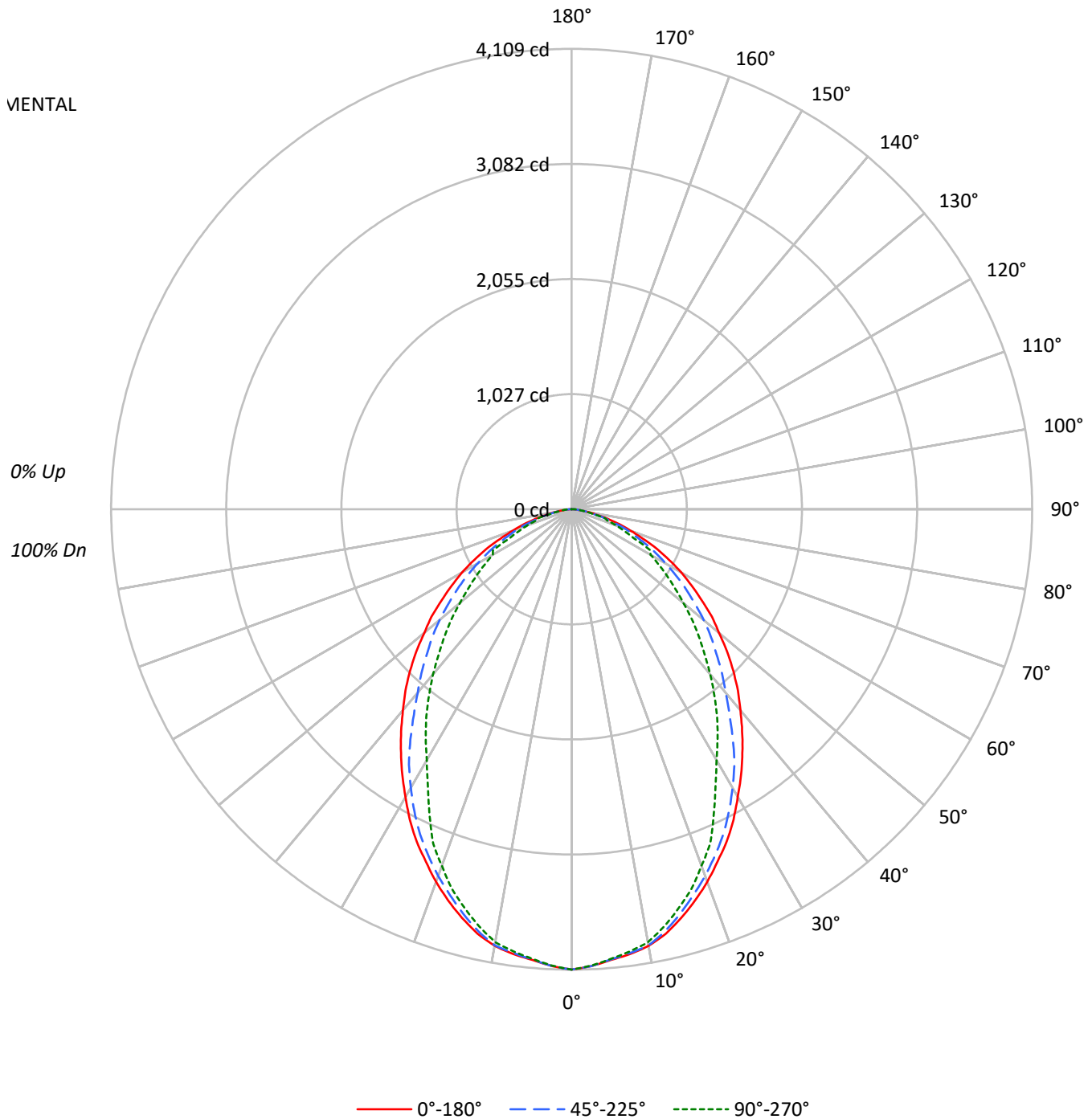
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	11056	11056	11056
5°	10906	10893	10881
10°	10812	10799	10721
15°	10520	10414	10269
20°	10134	9970	9698
25°	9717	9506	8913
30°	9210	8915	8029
35°	8723	8239	7428
40°	8226	7509	6758
45°	7755	6941	6110
50°	7178	6443	5449
55°	6641	5839	4880
60°	6084	5215	4371
65°	5353	4567	3871
70°	4410	3998	3289
75°	3506	3062	3210
80°	2356	2208	2061
85°	1467	1760	2053

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7755 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	382.5	4.7
10°-20°	1049.6	13.0
20°-30°	1453.2	18.0
30°-40°	1549.5	19.2
40°-50°	1413.6	17.5
50°-60°	1107.4	13.7
60°-70°	721.8	8.9
70°-80°	319.8	4.0
80°-90°	68.6	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°	2885.3	35.8
0°-40°	4434.8	55.0
0°-60°	6955.8	86.2
0°-90°	8065.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8065.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4109	4109	4109	4109	4109	
5°	4038	4033	4033	4028	4028	383
15°	3776	3776	3738	3700	3686	1062
25°	3273	3254	3202	3088	3002	1503
35°	2655	2636	2508	2318	2261	1660
45°	2038	1995	1824	1672	1606	1570
55°	1416	1373	1244	1097	1040	1270
65°	841	793	717	732	608	829
75°	337	314	294	280	309	361
85°	48	52	57	62	66	66
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4108.7	4108.7	4108.7	4108.7	4108.7
2.5°	4080.2	4080.2	4080.2	4075.5	4075.5
5°	4037.5	4032.7	4032.7	4028.0	4028.0
7.5°	4004.2	3999.5	3994.7	3990.0	3980.5
10°	3956.7	3956.7	3952.0	3928.2	3923.5
12.5°	3880.7	3876.0	3857.0	3823.7	3814.2
15°	3776.2	3776.2	3738.2	3700.2	3686.0
17.5°	3662.2	3657.5	3610.0	3572.0	3553.0
20°	3538.7	3529.2	3481.7	3420.0	3386.7
22.5°	3401.0	3401.0	3344.0	3263.2	3230.0
25°	3272.7	3253.7	3201.5	3087.5	3002.0
27.5°	3125.5	3097.0	3040.0	2878.5	2778.7
30°	2964.0	2949.7	2869.0	2660.0	2584.0
32.5°	2812.0	2788.2	2702.7	2484.2	2422.5
35°	2655.2	2636.2	2508.0	2318.0	2261.0
37.5°	2498.5	2474.7	2313.2	2161.2	2090.0
40°	2341.7	2313.2	2137.5	1999.7	1923.7
42.5°	2194.5	2156.5	1985.5	1838.2	1752.7
45°	2037.7	1995.0	1824.0	1672.0	1605.5
47.5°	1881.0	1843.0	1686.2	1529.5	1453.5
50°	1714.7	1681.5	1539.0	1382.2	1301.5
52.5°	1577.0	1524.7	1387.0	1230.2	1163.7
55°	1415.5	1372.7	1244.5	1097.2	1040.2
57.5°	1268.2	1225.5	1106.7	969.0	921.5
60°	1130.5	1068.7	969.0	850.2	812.2
62.5°	978.5	931.0	845.5	745.7	793.2
65°	840.7	793.2	717.2	731.5	608.0
67.5°	688.7	665.0	598.5	532.0	513.0
70°	560.5	532.0	508.2	437.0	418.0
72.5°	446.5	418.0	384.7	346.7	332.5
75°	337.2	313.5	294.5	280.2	308.7
77.5°	232.7	223.2	209.0	194.7	190.0
80°	152.0	147.2	142.5	137.7	133.0
82.5°	90.2	90.2	90.2	90.2	90.2
85°	47.5	52.2	57.0	61.7	66.5
87.5°	28.5	28.5	33.2	38.0	42.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)