

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: P561717

Luminaire Tested: FSR-12-4-LD4-2STD-35-UNV-80-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561717
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-LD4-2STD-35-UNV-80-86-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6437.0 lumens
Efficiency: N/A
Efficacy: 96.7 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

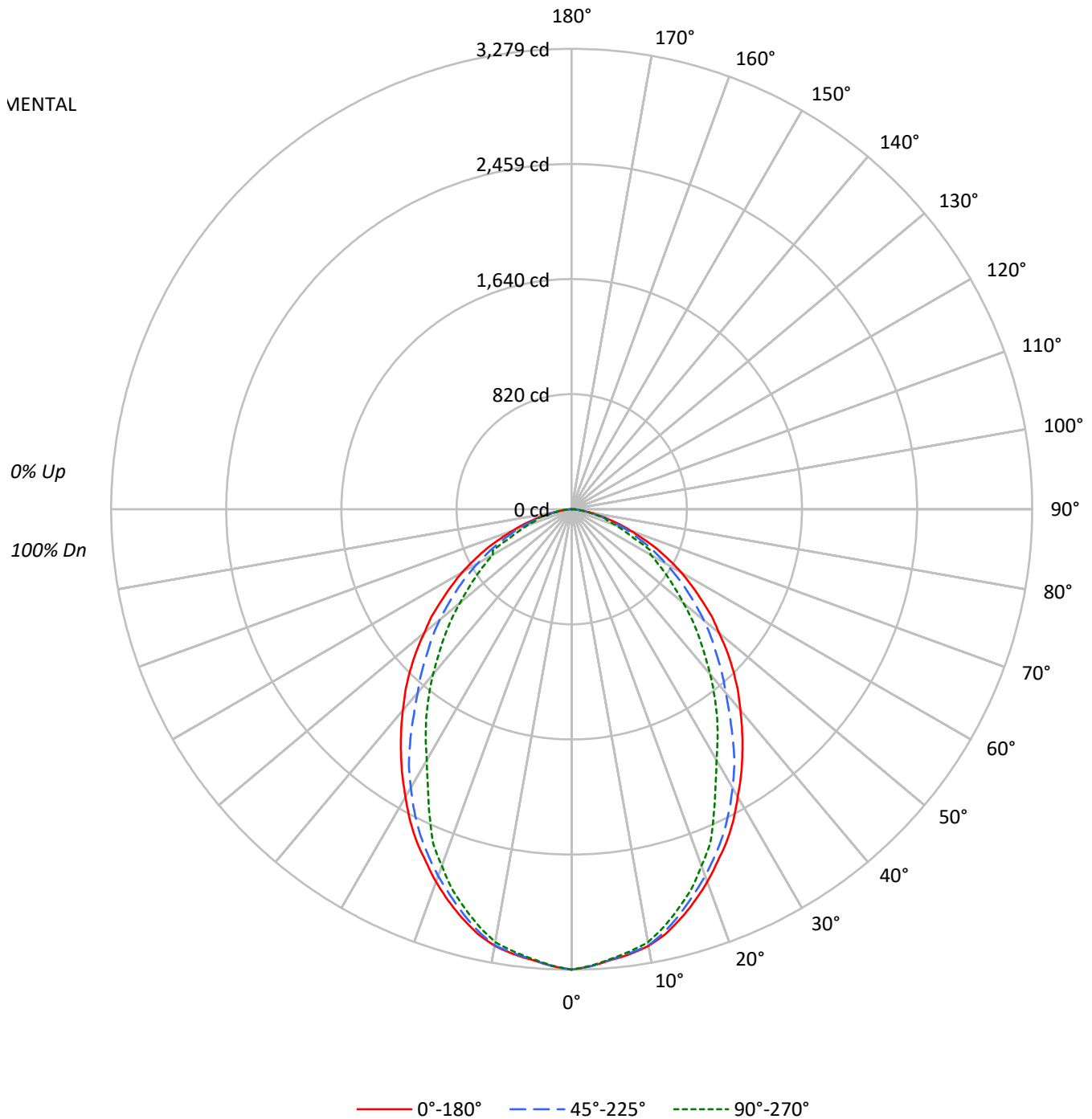
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	8823	8823	8823
5°	8704	8693	8683
10°	8628	8618	8556
15°	8396	8311	8195
20°	8087	7957	7740
25°	7755	7586	7113
30°	7350	7114	6408
35°	6961	6575	5928
40°	6565	5992	5393
45°	6189	5539	4876
50°	5729	5142	4348
55°	5300	4660	3895
60°	4856	4162	3489
65°	4272	3645	3089
70°	3519	3191	2625
75°	2798	2443	2562
80°	1880	1762	1644
85°	1170	1405	1639

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6189 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	305.2	4.7
10°-20°	837.7	13.0
20°-30°	1159.7	18.0
30°-40°	1236.6	19.2
40°-50°	1128.1	17.5
50°-60°	883.8	13.7
60°-70°	576.0	8.9
70°-80°	255.2	4.0
80°-90°	54.8	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°	2302.6	35.8
0°-40°	3539.1	55.0
0°-60°	5551.0	86.2
0°-90°	6437.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6437.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3279	3279	3279	3279	3279	
5°	3222	3218	3218	3214	3214	306
15°	3014	3014	2983	2953	2942	847
25°	2612	2597	2555	2464	2396	1199
35°	2119	2104	2002	1850	1804	1325
45°	1626	1592	1456	1334	1281	1253
55°	1130	1096	993	876	830	1013
65°	671	633	572	584	485	661
75°	269	250	235	224	246	288
85°	38	42	46	49	53	53
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3278.9	3278.9	3278.9	3278.9	3278.9
2.5°	3256.2	3256.2	3256.2	3252.4	3252.4
5°	3222.1	3218.3	3218.3	3214.5	3214.5
7.5°	3195.5	3191.7	3187.9	3184.2	3176.6
10°	3157.6	3157.6	3153.8	3134.9	3131.1
12.5°	3097.0	3093.2	3078.0	3051.5	3043.9
15°	3013.6	3013.6	2983.3	2952.9	2941.6
17.5°	2922.6	2918.8	2880.9	2850.6	2835.4
20°	2824.0	2816.5	2778.6	2729.3	2702.7
22.5°	2714.1	2714.1	2668.6	2604.2	2577.6
25°	2611.8	2596.6	2554.9	2463.9	2395.7
27.5°	2494.3	2471.5	2426.0	2297.1	2217.5
30°	2365.4	2354.0	2289.6	2122.8	2062.1
32.5°	2244.1	2225.1	2156.9	1982.5	1933.2
35°	2119.0	2103.8	2001.5	1849.8	1804.4
37.5°	1993.9	1974.9	1846.1	1724.8	1667.9
40°	1868.8	1846.1	1705.8	1595.9	1535.2
42.5°	1751.3	1721.0	1584.5	1467.0	1398.8
45°	1626.2	1592.1	1455.6	1334.3	1281.2
47.5°	1501.1	1470.8	1345.7	1220.6	1159.9
50°	1368.4	1341.9	1228.2	1103.1	1038.6
52.5°	1258.5	1216.8	1106.9	981.8	928.7
55°	1129.6	1095.5	993.2	875.6	830.2
57.5°	1012.1	978.0	883.2	773.3	735.4
60°	902.2	852.9	773.3	678.5	648.2
62.5°	780.9	743.0	674.7	595.1	633.0
65°	670.9	633.0	572.4	583.8	485.2
67.5°	549.6	530.7	477.6	424.6	409.4
70°	447.3	424.6	405.6	348.7	333.6
72.5°	356.3	333.6	307.0	276.7	265.3
75°	269.1	250.2	235.0	223.6	246.4
77.5°	185.7	178.2	166.8	155.4	151.6
80°	121.3	117.5	113.7	109.9	106.1
82.5°	72.0	72.0	72.0	72.0	72.0
85°	37.9	41.7	45.5	49.3	53.1
87.5°	22.7	22.7	26.5	30.3	34.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)