

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: P589912

Luminaire Tested: FSR-24-2-LD4-1HI-50-UNV-80-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589912
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-1HI-50-UNV-80-87-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

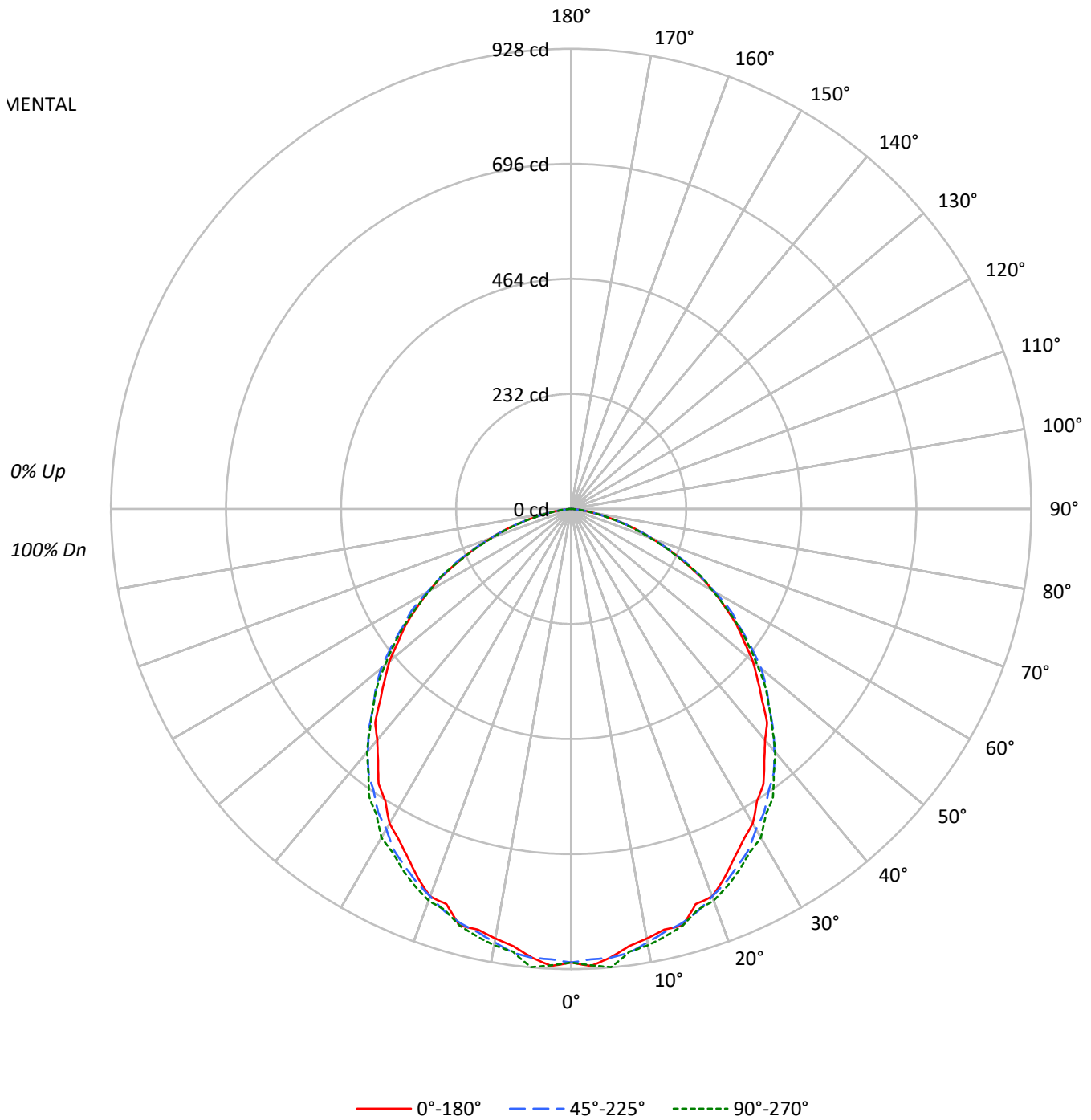
Lumens per Lamp: N/A
Luminaire Lumens: 2305.0 lumens
Efficiency: N/A
Efficacy: 106.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2461	2461	2461
5°	2453	2454	2506
10°	2403	2424	2441
15°	2422	2409	2423
20°	2381	2381	2407
25°	2308	2359	2385
30°	2276	2316	2378
35°	2223	2281	2332
40°	2136	2239	2249
45°	2072	2145	2149
50°	2004	2094	2054
55°	1909	1946	1932
60°	1785	1803	1771
65°	1592	1633	1580
70°	1366	1371	1332
75°	1081	1079	1038
80°	725	705	677
85°	395	389	364

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2201 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.0	3.7
10°-20°	243.8	10.6
20°-30°	365.3	15.8
30°-40°	432.9	18.8
40°-50°	433.7	18.8
50°-60°	368.2	16.0
60°-70°	248.2	10.8
70°-80°	109.1	4.7
80°-90°	17.7	0.8
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°	695.1	30.2
0°-40°	1128.1	48.9
0°-60°	1930.0	83.7
0°-90°	2305.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2305.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	915	915	915	915	915	
5°	908	906	908	906	928	86
15°	870	859	865	869	870	242
25°	777	782	794	805	803	359
35°	677	679	694	710	710	420
45°	544	554	564	578	565	421
55°	407	404	415	412	412	362
65°	250	247	256	247	248	249
75°	104	102	104	96	100	112
85°	13	12	13	12	12	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	914.6	914.6	914.6	914.6	914.6
2.5°	922.5	915.5	909.0	916.6	921.2
5°	908.1	905.9	908.4	905.7	927.6
7.5°	889.4	897.6	902.3	899.3	900.6
10°	879.5	876.7	887.2	894.5	893.4
12.5°	868.9	873.1	873.7	881.6	882.3
15°	869.5	859.4	864.7	869.2	869.6
17.5°	835.7	846.5	850.2	860.5	847.7
20°	831.6	823.6	831.6	842.1	840.4
22.5°	806.2	797.3	814.3	823.6	823.1
25°	777.4	781.6	794.4	804.7	803.1
27.5°	752.1	757.0	775.2	789.5	780.3
30°	732.6	730.1	745.5	758.2	765.3
32.5°	697.8	706.7	724.7	737.3	730.6
35°	676.6	678.6	694.3	710.4	709.9
37.5°	639.7	649.0	671.1	675.6	671.4
40°	608.1	617.5	637.4	642.3	640.3
42.5°	584.9	586.5	603.6	609.2	600.3
45°	544.4	554.5	563.7	578.3	564.6
47.5°	509.9	514.6	534.5	538.3	531.1
50°	478.6	480.3	500.2	495.4	490.6
52.5°	439.3	446.2	457.5	456.5	451.0
55°	406.9	404.2	414.8	412.0	411.9
57.5°	368.1	372.8	381.5	377.0	369.8
60°	331.7	331.8	335.0	329.9	329.0
62.5°	291.2	292.6	293.3	287.1	297.2
65°	250.0	246.7	256.4	246.6	248.2
67.5°	212.1	213.7	212.8	206.6	209.0
70°	173.6	175.7	174.2	167.2	169.3
72.5°	138.4	135.8	137.5	128.7	132.7
75°	104.0	101.9	103.8	96.5	99.8
77.5°	70.9	72.5	71.3	67.4	69.7
80°	46.8	45.5	45.5	43.2	43.7
82.5°	27.3	26.0	25.6	24.9	26.0
85°	12.8	12.4	12.6	12.3	11.8
87.5°	4.6	4.7	4.7	4.5	4.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)