

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: P561073

Luminaire Tested: FSR-12-4-LD4-1LO-50-UNV-80-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561073
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-LD4-1LO-50-UNV-80-84-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

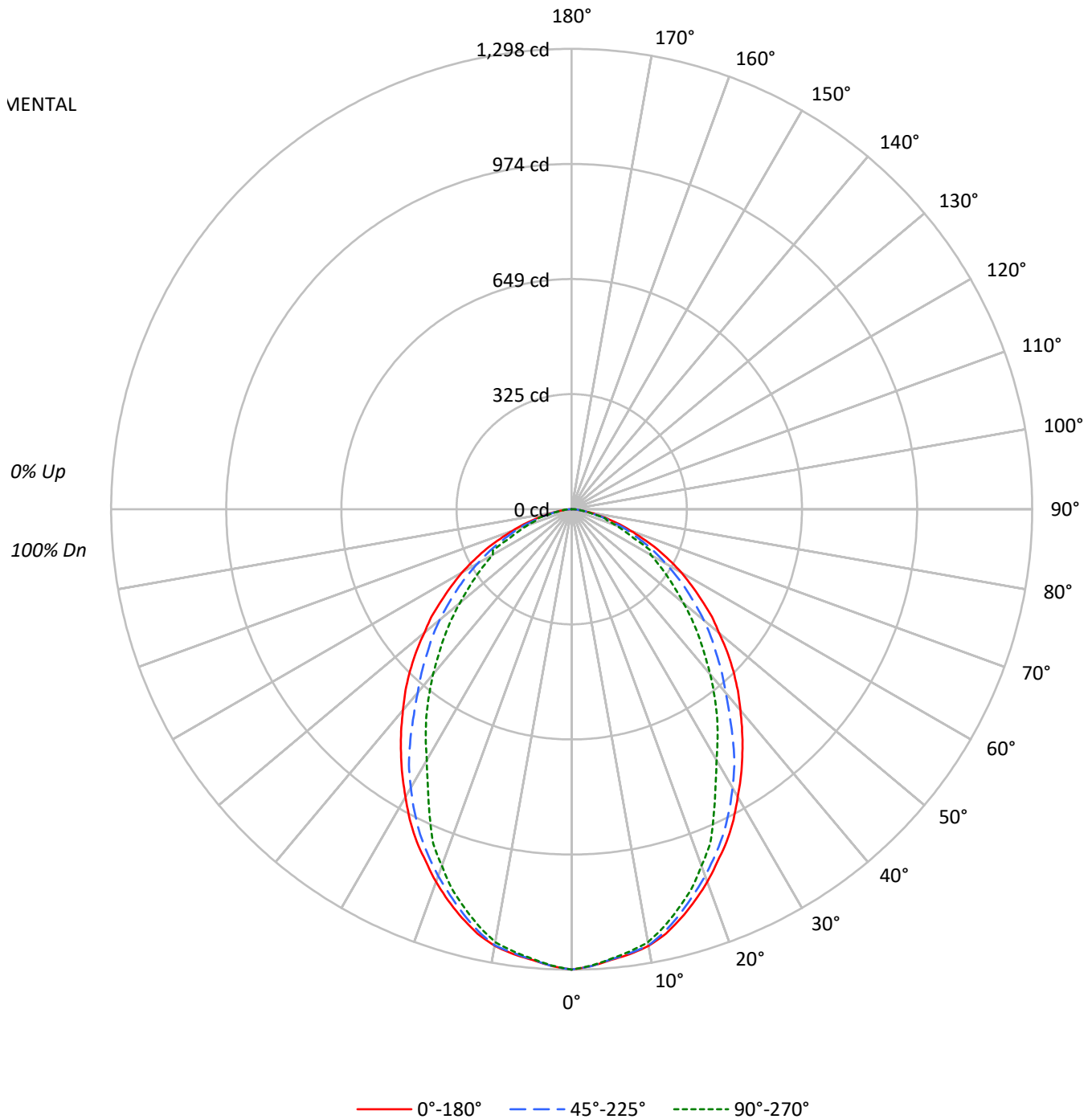
Lumens per Lamp: N/A
Luminaire Lumens: 2548.0 lumens
Efficiency: N/A
Efficacy: 108.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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	0																			
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	3493	3493	3493
5°	3445	3441	3437
10°	3415	3411	3387
15°	3323	3290	3244
20°	3201	3150	3064
25°	3070	3003	2816
30°	2909	2816	2536
35°	2756	2603	2346
40°	2598	2372	2135
45°	2450	2193	1930
50°	2268	2035	1721
55°	2098	1844	1542
60°	1922	1647	1381
65°	1691	1443	1223
70°	1393	1264	1039
75°	1107	967	1014
80°	744	697	651
85°	463	556	648

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2450 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.8	4.7
10°-20°	331.6	13.0
20°-30°	459.0	18.0
30°-40°	489.5	19.2
40°-50°	446.5	17.5
50°-60°	349.8	13.7
60°-70°	228.0	8.9
70°-80°	101.0	4.0
80°-90°	21.7	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°	911.4	35.8
0°-40°	1400.9	55.0
0°-60°	2197.3	86.2
0°-90°	2548.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2548.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1298	1298	1298	1298	1298	
5°	1275	1274	1274	1272	1272	121
15°	1193	1193	1181	1169	1164	335
25°	1034	1028	1011	975	948	475
35°	839	833	792	732	714	524
45°	644	630	576	528	507	496
55°	447	434	393	347	329	401
65°	266	251	227	231	192	262
75°	106	99	93	88	98	114
85°	15	16	18	20	21	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1297.9	1297.9	1297.9	1297.9	1297.9
2.5°	1288.9	1288.9	1288.9	1287.4	1287.4
5°	1275.4	1273.9	1273.9	1272.4	1272.4
7.5°	1264.9	1263.4	1261.9	1260.4	1257.4
10°	1249.9	1249.9	1248.4	1240.9	1239.4
12.5°	1225.9	1224.4	1218.4	1207.9	1204.9
15°	1192.9	1192.9	1180.9	1168.9	1164.4
17.5°	1156.9	1155.4	1140.4	1128.4	1122.4
20°	1117.9	1114.9	1099.9	1080.3	1069.8
22.5°	1074.3	1074.3	1056.3	1030.8	1020.3
25°	1033.8	1027.8	1011.3	975.3	948.3
27.5°	987.3	978.3	960.3	909.3	877.8
30°	936.3	931.8	906.3	840.3	816.3
32.5°	888.3	880.8	853.8	784.8	765.2
35°	838.8	832.8	792.3	732.2	714.2
37.5°	789.3	781.8	730.7	682.7	660.2
40°	739.7	730.7	675.2	631.7	607.7
42.5°	693.2	681.2	627.2	580.7	553.7
45°	643.7	630.2	576.2	528.2	507.2
47.5°	594.2	582.2	532.7	483.2	459.1
50°	541.7	531.2	486.2	436.6	411.1
52.5°	498.2	481.7	438.1	388.6	367.6
55°	447.1	433.6	393.1	346.6	328.6
57.5°	400.6	387.1	349.6	306.1	291.1
60°	357.1	337.6	306.1	268.6	256.6
62.5°	309.1	294.1	267.1	235.6	250.6
65°	265.6	250.6	226.6	231.1	192.1
67.5°	217.6	210.1	189.1	168.1	162.1
70°	177.1	168.1	160.6	138.0	132.0
72.5°	141.0	132.0	121.5	109.5	105.0
75°	106.5	99.0	93.0	88.5	97.5
77.5°	73.5	70.5	66.0	61.5	60.0
80°	48.0	46.5	45.0	43.5	42.0
82.5°	28.5	28.5	28.5	28.5	28.5
85°	15.0	16.5	18.0	19.5	21.0
87.5°	9.0	9.0	10.5	12.0	13.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)