

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: P562160

Luminaire Tested: FSR-24-4-LD4-1LO-40-UNV-80-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562160
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-LD4-1LO-40-UNV-80-84-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2473.0 lumens
Efficiency: N/A
Efficacy: 105.7 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

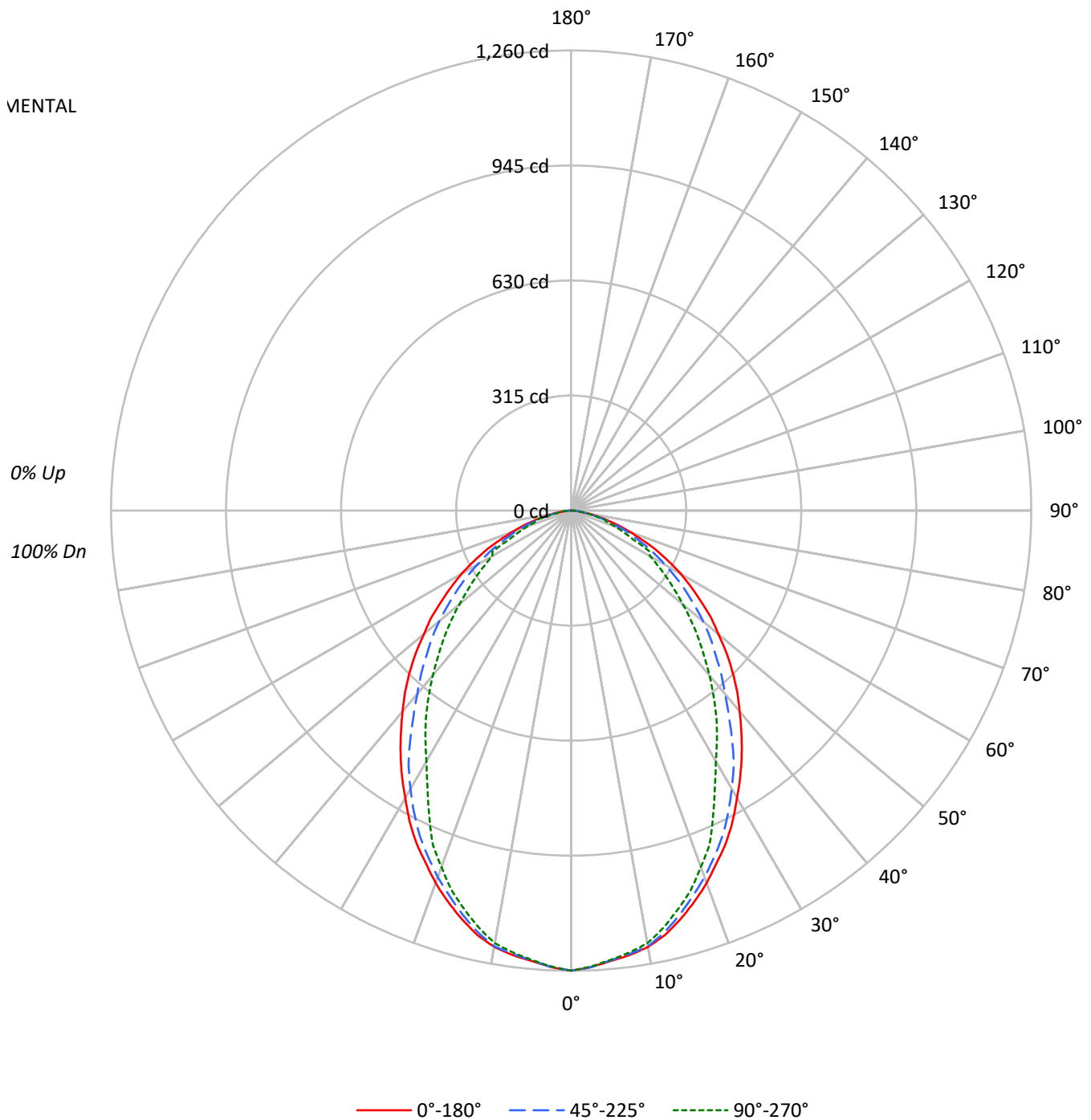
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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											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°	1695	1695	1695
5°	1672	1670	1668
10°	1657	1655	1643
15°	1613	1596	1574
20°	1554	1528	1487
25°	1490	1457	1366
30°	1412	1367	1231
35°	1337	1263	1139
40°	1261	1151	1036
45°	1189	1064	937
50°	1100	988	835
55°	1018	895	748
60°	933	799	670
65°	821	700	593
70°	676	613	504
75°	538	469	492
80°	361	339	316
85°	225	270	315

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1189 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.3	4.7
10°-20°	321.8	13.0
20°-30°	445.5	18.0
30°-40°	475.1	19.2
40°-50°	433.4	17.5
50°-60°	339.5	13.7
60°-70°	221.3	8.9
70°-80°	98.0	4.0
80°-90°	21.1	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°	884.6	35.8
0°-40°	1359.7	55.0
0°-60°	2132.6	86.2
0°-90°	2473.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2473.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1260	1260	1260	1260	1260	
5°	1238	1236	1236	1235	1235	118
15°	1158	1158	1146	1134	1130	325
25°	1003	998	982	947	920	461
35°	814	808	769	711	693	509
45°	625	612	559	513	492	481
55°	434	421	382	336	319	389
65°	258	243	220	224	186	254
75°	103	96	90	86	95	111
85°	15	16	18	19	20	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1259.7	1259.7	1259.7	1259.7	1259.7
2.5°	1251.0	1251.0	1251.0	1249.5	1249.5
5°	1237.9	1236.4	1236.4	1235.0	1235.0
7.5°	1227.7	1226.2	1224.8	1223.3	1220.4
10°	1213.1	1213.1	1211.7	1204.4	1202.9
12.5°	1189.8	1188.4	1182.5	1172.3	1169.4
15°	1157.8	1157.8	1146.1	1134.5	1130.1
17.5°	1122.8	1121.4	1106.8	1095.1	1089.3
20°	1085.0	1082.0	1067.5	1048.5	1038.4
22.5°	1042.7	1042.7	1025.2	1000.5	990.3
25°	1003.4	997.6	981.6	946.6	920.4
27.5°	958.3	949.5	932.0	882.5	851.9
30°	908.7	904.4	879.6	815.5	792.2
32.5°	862.1	854.9	828.6	761.7	742.7
35°	814.1	808.3	768.9	710.7	693.2
37.5°	766.0	758.7	709.2	662.6	640.8
40°	718.0	709.2	655.3	613.1	589.8
42.5°	672.8	661.2	608.7	563.6	537.4
45°	624.8	611.7	559.2	512.6	492.2
47.5°	576.7	565.1	517.0	468.9	445.6
50°	525.7	515.5	471.8	423.8	399.0
52.5°	483.5	467.5	425.2	377.2	356.8
55°	434.0	420.9	381.6	336.4	318.9
57.5°	388.8	375.7	339.3	297.1	282.5
60°	346.6	327.7	297.1	260.7	249.0
62.5°	300.0	285.4	259.2	228.6	243.2
65°	257.8	243.2	219.9	224.3	186.4
67.5°	211.2	203.9	183.5	163.1	157.3
70°	171.8	163.1	155.8	134.0	128.2
72.5°	136.9	128.2	118.0	106.3	101.9
75°	103.4	96.1	90.3	85.9	94.7
77.5°	71.4	68.4	64.1	59.7	58.3
80°	46.6	45.1	43.7	42.2	40.8
82.5°	27.7	27.7	27.7	27.7	27.7
85°	14.6	16.0	17.5	18.9	20.4
87.5°	8.7	8.7	10.2	11.7	13.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)