

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: io LED

Report Number: P273458

Luminaire Tested: **0.05-09W-840-30-STD-UNV-AN-3F0**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P273458  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1708-246-3)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: 0.05-09W-840-30-STD-UNV-AN-3F0  
Description: iO LIGHTING SERIES 2.0 LINEAR LED LUMINAIRE. 30 DEGREE OPTIC.  
VERY HIGH OUTPUT  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

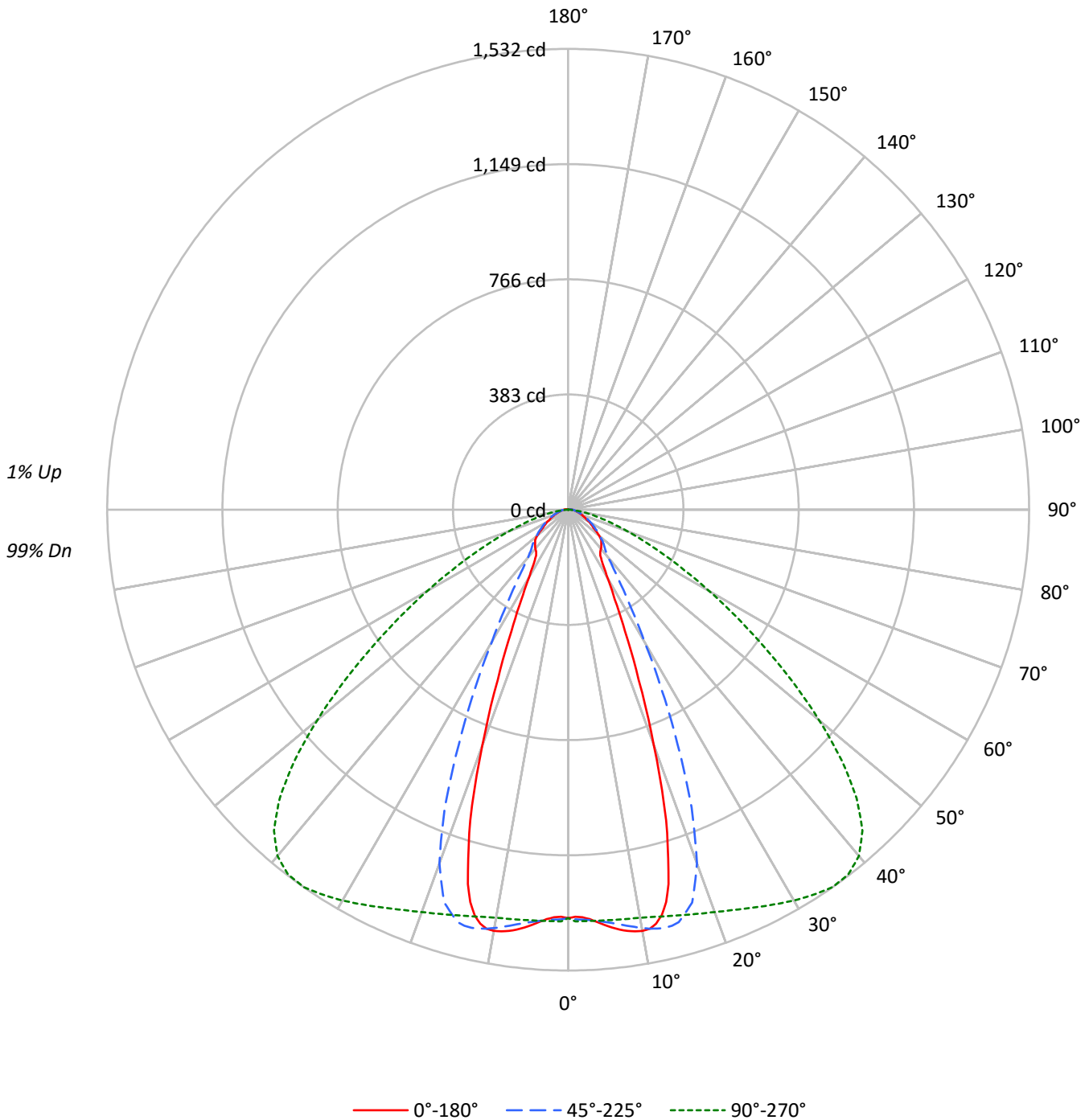
Lumens per Lamp: N/A  
Luminaire Lumens: 1947.3 lumens  
Efficiency: N/A  
Efficacy: 66.5 lumens/watt  
Spacing Criteria (0/90/45): 0.73 / 1.67 / 0.84  
Luminous Opening: Rectangular (W 2.92' x L: 0.21' x H: 0')  
CIE Type: Direct

Input Watts (W): 29.3  
Input Voltage (V): 120  
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: 25 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	99
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88
2	103	97	91	87	101	95	90	86	91	87	84	88	85	82	85	82	80	78
3	96	88	81	76	94	86	80	75	83	78	74	81	76	73	78	75	71	69
4	90	80	73	67	88	79	72	67	76	70	66	74	69	65	72	68	64	62
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56
6	79	67	60	55	77	67	59	54	65	59	54	63	58	53	62	57	53	51
7	74	62	55	50	72	62	55	50	60	54	49	59	53	49	58	52	49	47
8	70	58	51	46	68	57	50	46	56	50	45	55	49	45	54	49	45	43
9	66	54	47	42	64	54	47	42	52	46	42	51	46	42	50	45	41	40
10	62	51	44	39	61	50	44	39	49	43	39	48	43	39	47	42	39	37

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	24051	24051	24051
5°	24644	24463	24372
10°	25577	25402	24787
15°	23626	26034	25611
20°	15699	23589	26831
25°	8713	16801	28525
30°	5335	10385	30684
35°	4009	6619	33119
40°	3924	4780	34754
45°	3903	4229	33965
50°	3720	3811	29998
55°	3113	3413	24479
60°	2817	3146	19167
65°	2519	2813	14499
70°	2393	2610	10778
75°	2402	2594	8042
80°	2591	2826	5754
85°	3862	4126	3577



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	132.1	6.8
10°-20°	378.3	19.4
20°-30°	427.7	22.0
30°-40°	351.7	18.1
40°-50°	273.5	14.0
50°-60°	188.4	9.7
60°-70°	109.4	5.6
70°-80°	54.1	2.8
80°-90°	21.5	1.1
90°-100°	7.7	0.4
100°-110°	2.8	0.1
110°-120°	0.2	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°	938.1	48.2
0°-40°	1289.7	66.2
0°-60°	1751.7	90.0
0°-90°	1936.7	99.5
90°-120°	10.7	0.5
90°-150°	10.7	0.5
90°-180°	11.0	0.6
0°-180°	1947.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1358	1358	1358	1358	1358	
5°	1386	1382	1376	1361	1371	134
15°	1288	1337	1420	1411	1396	339
25°	446	527	860	1377	1459	217
35°	185	198	306	846	1532	123
45°	156	153	169	381	1356	120
55°	101	103	110	207	793	93
65°	60	61	67	116	346	60
75°	35	36	38	53	118	37
85°	19	19	20	18	18	17
90°	13	14	14	9	1	7
95°	10	10	9	4	0	8
105°	5	5	3	0	0	6
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P273458

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1357.7	1357.7	1357.7	1357.7	1357.7	1357.7	1357.7	1357.7	1357.7	1357.7	1357.7
1°	1353.5	1353.0	1350.3	1352.1	1357.2	1361.8	1364.1	1363.2	1362.7	1361.8	1361.4
2°	1355.8	1355.3	1353.0	1354.9	1360.0	1364.6	1366.4	1365.5	1364.1	1363.7	1362.3
3°	1362.7	1362.3	1359.5	1360.9	1365.5	1368.8	1369.7	1368.8	1367.4	1366.4	1364.6
4°	1373.8	1372.9	1369.2	1369.2	1372.5	1374.3	1374.8	1373.4	1372.5	1370.6	1368.3
5°	1385.9	1384.0	1379.4	1378.9	1380.8	1382.2	1381.2	1379.9	1378.0	1375.7	1373.4
6°	1397.0	1395.6	1390.0	1389.1	1390.5	1390.5	1388.6	1386.3	1384.9	1381.7	1378.5
7°	1406.7	1404.8	1399.7	1398.8	1400.2	1399.7	1397.9	1395.1	1392.8	1388.6	1384.9
8°	1414.1	1412.2	1407.6	1406.7	1409.0	1408.5	1407.1	1404.4	1401.6	1396.5	1391.4
9°	1419.2	1416.8	1412.7	1412.7	1415.9	1416.4	1415.5	1413.1	1410.4	1403.9	1399.3
10°	1421.9	1418.7	1415.9	1415.9	1420.1	1422.4	1421.9	1420.1	1417.8	1412.2	1407.1
11°	1419.2	1415.0	1414.1	1415.5	1420.5	1424.2	1425.6	1425.6	1424.2	1419.2	1414.5
12°	1406.7	1403.0	1403.9	1404.8	1413.6	1420.1	1424.2	1427.0	1427.9	1423.8	1421.5
13°	1383.6	1379.4	1380.8	1385.9	1398.3	1408.1	1416.8	1423.3	1428.4	1426.6	1427.0
14°	1344.2	1339.2	1347.5	1351.2	1369.7	1384.9	1399.3	1411.8	1422.4	1425.2	1429.8
15°	1288.3	1283.7	1295.7	1300.8	1326.2	1348.4	1369.7	1390.5	1409.4	1419.6	1428.9
17.5°	1082.5	1077.4	1095.0	1117.7	1150.5	1197.7	1236.0	1284.1	1330.8	1369.7	1402.5
20°	832.8	836.0	848.1	870.3	914.7	966.5	1025.2	1098.7	1173.6	1251.3	1321.1
22.5°	611.8	615.5	625.6	646.5	686.2	740.3	795.8	876.3	964.6	1071.0	1177.8
25°	445.8	452.2	456.9	475.8	507.7	546.6	597.0	663.1	748.7	859.6	986.3
27.5°	335.3	339.0	343.6	357.0	378.3	406.9	448.1	499.4	572.0	668.7	786.1
30°	260.8	262.2	266.8	276.5	289.0	311.2	340.3	378.7	431.0	507.7	605.3
32.5°	211.8	212.7	215.5	220.1	230.7	245.1	266.4	295.5	332.9	392.1	468.4
35°	185.4	185.9	187.3	189.1	194.2	202.1	215.5	236.8	264.0	306.1	365.8
37.5°	175.3	175.3	175.7	176.2	177.6	180.3	186.8	198.4	216.4	247.9	292.2
40°	169.7	169.7	169.7	168.8	169.2	170.2	172.9	178.5	186.8	206.7	237.7
42.5°	163.2	162.8	162.3	161.4	160.9	161.8	165.1	167.9	172.5	182.7	201.6
45°	155.8	155.8	155.4	153.5	153.1	152.6	153.5	155.8	161.4	168.8	179.4
47.5°	148.9	148.4	147.0	144.3	143.3	143.3	144.3	144.7	147.0	154.4	164.2
50°	135.0	135.0	135.0	133.2	133.2	132.7	132.7	134.1	135.5	138.3	146.6
52.5°	116.5	116.5	117.0	116.5	119.3	119.8	120.2	120.7	122.1	125.3	130.4
55°	100.8	100.8	101.7	101.3	102.2	104.0	106.8	109.6	109.6	110.5	116.1
57.5°	90.2	90.2	90.6	89.7	90.2	90.6	92.0	95.3	98.0	99.4	102.7
60°	79.5	80.0	80.0	79.5	80.5	80.9	81.4	83.2	84.6	88.8	91.6
62.5°	68.4	68.9	68.9	68.9	69.8	70.7	71.2	72.6	74.0	76.3	80.9
65°	60.1	60.1	60.1	60.1	60.6	61.0	62.0	63.8	64.3	67.1	69.8
67.5°	52.7	52.7	53.2	52.7	53.2	53.6	53.6	55.0	56.4	58.7	60.6
70°	46.2	46.2	46.2	46.7	46.7	47.2	47.2	47.6	48.6	50.4	52.7
72.5°	40.2	40.7	40.7	41.2	41.2	41.2	41.2	42.1	42.1	43.5	45.3
75°	35.1	35.6	35.6	35.6	35.6	36.1	36.1	36.5	37.0	37.9	39.3
77.5°	30.5	30.5	30.5	30.5	31.0	31.0	31.4	31.4	31.9	32.8	33.8
80°	25.4	26.4	26.4	26.4	26.4	26.8	26.8	27.3	27.3	27.7	28.2
82.5°	22.2	22.2	22.2	22.7	22.7	22.7	22.7	23.6	23.6	24.0	24.0
85°	19.0	19.0	19.0	19.4	19.4	19.4	19.4	19.9	19.9	20.3	19.9
87.5°	16.2	16.2	16.2	16.2	16.2	16.6	16.6	16.6	16.6	16.6	16.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
90°	13.4	13.9	13.9	13.9	13.9	13.9	14.3	13.9	13.9	13.9	13.4
92.5°	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.1	10.6
95°	10.2	10.2	10.2	10.2	10.2	10.2	9.7	9.7	9.2	8.8	7.9
97.5°	8.8	8.3	8.3	8.3	8.3	8.3	7.9	7.9	7.4	6.9	6.0
100°	7.4	7.4	7.4	7.4	7.4	6.9	6.5	6.5	6.0	5.1	4.2
102.5°	6.5	6.5	6.5	6.5	6.0	6.0	5.5	5.1	4.6	4.2	3.2
105°	5.1	5.1	5.1	5.1	5.1	4.6	4.2	4.2	3.2	2.8	1.8
107.5°	4.2	4.2	4.2	4.2	4.2	3.7	3.2	3.2	2.3	1.4	0.9
110°	3.2	3.2	3.2	3.2	3.2	3.2	2.3	1.8	1.4	0.9	0.9
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1357.7	1357.7	1357.7	1357.7	1357.7	1357.7	1357.7	1357.7
1°	1353.5	1352.1	1352.6	1354.0	1356.3	1364.6	1366.4	1368.8
2°	1354.9	1353.5	1354.0	1354.9	1357.2	1365.5	1366.9	1368.8
3°	1357.2	1354.9	1355.8	1356.3	1357.2	1365.5	1367.4	1368.8
4°	1360.9	1357.7	1358.1	1357.7	1358.6	1366.0	1368.3	1369.7
5°	1365.1	1360.9	1361.4	1360.4	1360.0	1367.4	1369.2	1370.6
6°	1369.7	1365.1	1365.1	1363.2	1362.3	1368.8	1370.1	1371.5
7°	1375.7	1369.2	1368.8	1366.4	1365.1	1370.6	1371.1	1372.5
8°	1382.2	1374.3	1373.8	1371.1	1367.8	1372.5	1373.4	1374.3
9°	1388.6	1379.9	1378.5	1374.8	1371.1	1374.8	1375.2	1375.2
10°	1396.0	1385.9	1384.0	1379.9	1375.7	1377.5	1377.5	1378.0
11°	1403.4	1392.3	1390.0	1384.5	1379.9	1381.2	1380.3	1379.9
12°	1409.4	1398.3	1396.5	1390.0	1384.5	1384.9	1383.6	1383.6
13°	1415.9	1405.3	1402.0	1396.0	1389.6	1389.6	1387.7	1388.2
14°	1419.6	1410.8	1408.1	1401.6	1395.1	1394.6	1391.9	1391.9
15°	1421.9	1415.0	1413.1	1408.1	1401.1	1400.2	1396.0	1396.5
17.5°	1415.5	1421.5	1423.8	1423.8	1416.8	1414.5	1408.5	1409.4
20°	1372.5	1400.2	1424.2	1433.5	1430.7	1430.7	1423.8	1423.3
22.5°	1274.4	1345.2	1402.5	1434.4	1443.2	1446.9	1441.8	1440.0
25°	1116.3	1233.3	1341.0	1412.7	1446.9	1462.6	1459.4	1459.4
27.5°	919.7	1082.1	1232.8	1360.0	1433.5	1471.4	1477.4	1479.7
30°	737.1	898.9	1083.0	1258.2	1391.4	1469.1	1493.6	1500.1
32.5°	578.5	724.1	905.4	1124.6	1312.3	1448.3	1504.2	1517.7
35°	454.1	571.1	738.5	954.4	1197.7	1394.6	1500.5	1531.5
37.5°	358.4	454.6	595.6	797.7	1051.5	1304.0	1474.2	1528.7
40°	289.0	363.9	475.8	655.7	899.4	1187.0	1417.3	1502.9
42.5°	237.2	296.9	388.0	537.8	762.1	1057.1	1331.8	1447.4
45°	201.6	245.5	318.1	443.0	643.2	927.6	1223.1	1355.8
47.5°	179.9	209.9	267.7	371.3	546.1	809.7	1097.8	1232.8
50°	161.4	185.9	230.3	315.8	466.1	698.2	963.2	1088.5
52.5°	142.0	164.2	201.6	271.9	400.5	600.7	831.9	940.6
55°	125.8	143.3	176.6	238.1	345.4	512.8	702.4	792.6
57.5°	111.0	125.8	153.5	207.6	301.0	434.2	585.0	661.3
60°	97.1	110.1	134.1	179.0	256.2	360.7	477.2	541.0
62.5°	86.9	96.2	117.0	154.4	214.6	297.3	390.3	434.7
65°	76.8	85.1	100.8	131.3	178.0	240.0	312.1	345.9
67.5°	65.2	74.0	86.0	111.0	145.2	191.9	246.5	269.1
70°	56.4	62.0	73.1	91.6	117.5	152.1	191.4	208.1
72.5°	48.1	51.8	60.6	74.0	92.5	118.4	146.6	158.1
75°	41.2	43.9	48.6	57.8	71.7	89.7	108.7	117.5
77.5°	35.1	36.1	38.8	44.4	52.7	65.7	78.6	84.2
80°	29.1	30.1	30.1	32.8	37.5	45.3	52.7	56.4
82.5°	24.0	24.0	24.0	24.0	25.4	29.1	32.4	34.2
85°	19.4	19.0	18.0	17.1	16.6	16.2	17.1	17.6
87.5°	16.2	15.3	13.4	11.6	9.7	7.9	6.5	6.5





TEST NUMBER: P273458

CATALOG NUMBER: 0.05-09W-840-30-STD-UNV-AN-3F0

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
90°	12.5	11.6	9.7	7.9	5.5	3.2	1.8	0.9
92.5°	9.7	8.3	6.5	4.6	2.8	0.9	0.0	0.0
95°	6.9	6.0	4.2	2.8	0.9	0.0	0.0	0.0
97.5°	5.1	3.7	2.3	0.9	0.0	0.0	0.0	0.0
100°	3.2	2.3	0.9	0.0	0.0	0.0	0.0	0.0
102.5°	2.3	0.9	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.9	0.5	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110°	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)