

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: NEO-RAY

Report Number: P332206-930

Luminaire Tested: **S123DIW-S1000D1535U930-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332206-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIW-S1000D1535U930-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1535 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8430.7 lumens
Efficiency: N/A
Efficacy: 110.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

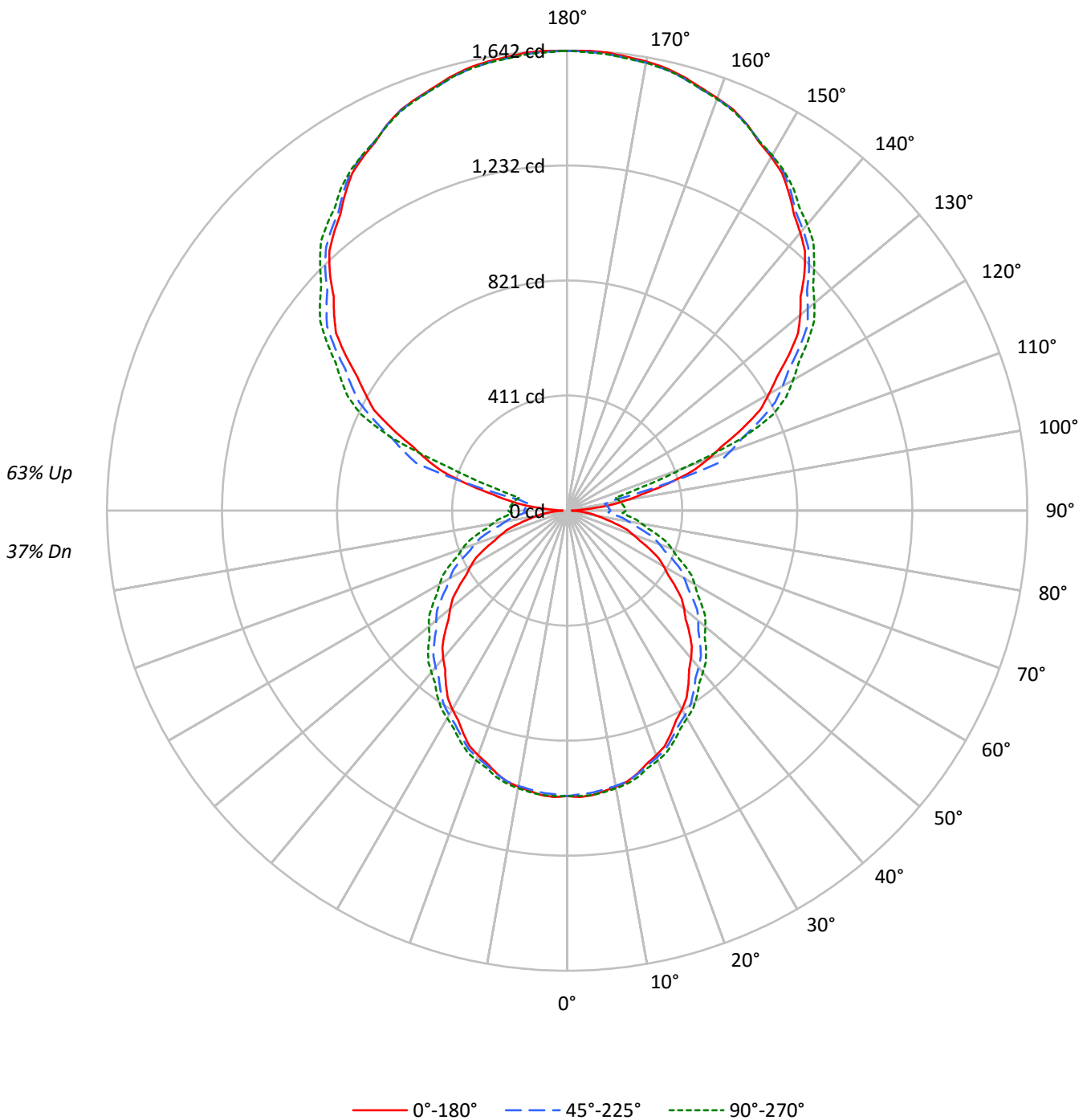
Input Watts (W): 76.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	104	104	104	104	94	94	94	94	76	76	76	60	60	60	44	44	44	37
1	94	90	85	82	85	81	78	75	66	63	61	51	50	48	38	37	36	30
2	85	78	71	66	77	71	65	60	57	53	50	44	42	39	33	31	30	24
3	78	68	61	55	70	62	55	50	50	45	41	39	36	33	29	27	25	20
4	71	60	52	46	64	55	48	42	44	39	35	35	31	28	26	23	21	17
5	65	53	45	39	58	48	41	36	39	34	30	31	27	24	23	20	18	15
6	60	48	39	34	54	43	36	31	35	30	26	28	24	21	21	18	16	13
7	55	43	35	29	50	39	32	27	32	27	23	25	21	18	19	16	14	11
8	51	39	31	26	46	35	29	24	29	24	20	23	19	16	17	15	13	10
9	47	35	28	23	43	32	26	21	27	21	18	21	17	15	16	13	11	9
10	44	32	25	20	40	30	23	19	24	19	16	19	16	13	15	12	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10964	10964	10964
5°	10999	10689	10694
10°	10900	10443	10390
15°	10759	10162	10058
20°	10559	9844	9692
25°	10311	9476	9308
30°	10057	9145	8918
35°	9773	8796	8606
40°	9500	8479	8272
45°	9199	8172	8007
50°	8904	7871	7713
55°	8574	7562	7449
60°	8255	7248	7178
65°	7926	6915	6856
70°	7430	6538	6527
75°	6807	6107	6190
80°	6087	5683	5807
85°	5426	5394	5585



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.6	1.1
10°-20°	275.3	3.3
20°-30°	411.7	4.9
30°-40°	491.7	5.8
40°-50°	514.4	6.1
50°-60°	482.8	5.7
60°-70°	403.2	4.8
70°-80°	288.5	3.4
80°-90°	176.6	2.1
90°-100°	167.6	2.0
100°-110°	363.6	4.3
110°-120°	735.8	8.7
120°-130°	899.8	10.7
130°-140°	942.6	11.2
140°-150°	871.7	10.3
150°-160°	700.8	8.3
160°-170°	452.3	5.4
170°-180°	155.9	1.8
0°-30°	783.6	9.3
0°-40°	1275.2	15.1
0°-60°	2272.4	27.0
0°-90°	3140.7	37.3
90°-120°	1267.0	15.0
90°-150°	3981.1	47.2
90°-180°	5290.0	62.7
0°-180°	8430.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1019	1019	1019	1019	1019	
5°	1020	1017	1011	1019	1019	97
15°	971	974	973	984	983	273
25°	877	887	891	905	906	404
35°	755	772	787	803	808	472
45°	617	644	671	692	701	476
55°	470	507	547	576	586	421
65°	325	369	417	449	462	321
75°	176	229	284	319	334	188
85°	54	110	169	205	218	57
90°	16	83	155	196	211	13
95°	87	84	148	189	202	101
105°	372	406	350	176	178	394
115°	687	709	758	796	811	678
125°	964	975	1011	1036	1046	861
135°	1198	1205	1221	1244	1247	922
145°	1381	1388	1391	1402	1406	864
155°	1520	1518	1519	1524	1518	700
165°	1603	1599	1598	1607	1599	453
175°	1640	1635	1636	1643	1634	156
180°	1640	1640	1640	1640	1640	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6
2.5°	1023.1	1022.5	1021.9	1021.3	1020.8	1019.6	1018.1	1016.5	1014.9	1013.3	1014.9
5°	1019.8	1019.3	1018.8	1018.3	1017.8	1016.8	1015.4	1013.8	1012.4	1010.9	1012.8
7.5°	1009.7	1009.9	1010.0	1010.1	1010.2	1009.5	1008.1	1006.7	1005.2	1003.8	1006.2
10°	1000.9	1001.4	1001.9	1002.4	1002.9	1002.5	1001.3	1000.0	998.8	997.6	1000.0
12.5°	990.3	990.9	991.6	992.3	993.0	993.0	992.1	991.2	990.4	989.6	991.9
15°	970.9	971.7	972.4	973.1	973.9	974.1	973.9	973.6	973.4	973.1	975.7
17.5°	946.6	948.0	949.5	951.0	952.4	953.2	953.1	952.9	952.8	952.8	955.0
20°	928.8	930.3	931.7	933.2	934.7	935.7	936.2	936.7	937.2	937.7	939.9
22.5°	910.1	911.6	913.1	914.6	916.1	917.1	917.9	918.5	919.2	919.9	922.7
25°	876.6	879.1	881.6	884.0	886.5	888.1	888.8	889.6	890.3	891.0	894.2
27.5°	842.9	845.7	848.5	851.3	854.1	856.3	857.9	859.5	861.0	862.7	865.4
30°	818.9	822.1	825.3	828.5	831.8	834.3	836.3	838.3	840.2	842.2	845.2
32.5°	792.3	795.9	799.5	803.1	806.7	809.8	812.4	814.9	817.5	820.0	823.2
35°	754.6	758.5	762.5	766.4	770.4	773.9	777.1	780.3	783.5	786.8	790.4
37.5°	714.6	719.1	723.5	727.9	732.4	736.5	740.5	744.4	748.4	752.4	756.5
40°	687.9	692.4	696.8	701.3	705.7	710.5	715.3	720.3	725.2	730.2	734.3
42.5°	658.7	664.1	669.5	675.0	680.4	685.7	690.8	695.9	701.1	706.2	710.8
45°	616.9	622.9	628.8	634.7	640.7	646.7	652.8	659.0	665.2	671.3	676.0
47.5°	573.2	579.9	586.7	593.4	600.1	607.0	614.0	621.1	628.1	635.2	640.4
50°	544.9	551.7	558.6	565.6	572.4	579.8	587.3	595.0	602.7	610.3	616.0
52.5°	514.6	522.0	529.3	536.5	543.9	551.7	560.2	568.6	577.0	585.5	591.3
55°	470.5	478.7	486.7	494.9	503.0	511.5	520.4	529.3	538.2	547.1	553.8
57.5°	427.5	435.9	444.4	452.9	461.4	470.5	480.2	489.9	499.6	509.3	516.0
60°	397.3	406.1	415.0	423.9	432.8	442.2	452.3	462.5	472.6	482.7	489.6
62.5°	368.8	377.9	387.0	396.1	405.1	415.1	425.7	436.4	447.1	457.9	464.7
65°	325.1	334.8	344.4	354.0	363.6	373.8	384.7	395.5	406.3	417.3	424.6
67.5°	280.7	291.0	301.2	311.4	321.6	332.2	343.2	354.3	365.3	376.4	384.5
70°	249.6	260.2	270.8	281.5	292.1	303.3	315.1	327.0	338.8	350.7	358.6
72.5°	221.3	231.9	242.5	253.1	263.7	275.1	287.3	299.5	311.8	324.0	332.1
75°	176.4	188.0	199.6	211.2	222.8	234.7	247.1	259.4	271.7	284.1	292.2
77.5°	137.4	149.0	160.8	172.4	184.1	196.2	208.6	221.0	233.5	245.9	254.5
80°	109.8	122.0	134.0	146.1	158.2	170.6	183.4	196.3	209.1	221.9	230.3
82.5°	85.9	98.2	110.5	122.7	135.0	147.7	160.7	173.7	186.7	199.7	208.1
85°	54.4	66.7	79.0	91.4	103.7	116.4	129.5	142.5	155.6	168.7	177.1
87.5°	29.8	42.6	55.4	68.2	81.0	94.1	107.4	120.7	134.0	147.2	155.8
90°	15.7	30.4	45.2	60.0	74.8	90.3	106.3	122.5	138.5	154.7	164.1
92.5°	36.2	46.3	56.5	66.6	76.8	89.4	104.4	119.4	134.4	149.5	159.4
95°	86.6	85.0	83.6	82.1	80.6	87.4	102.5	117.5	132.6	147.7	157.2
97.5°	160.3	164.0	167.7	171.4	175.1	172.9	165.0	157.0	149.0	141.1	150.7
100°	216.0	229.3	242.6	255.9	269.2	260.4	229.5	198.6	167.7	136.7	146.1
102.5°	279.4	290.4	301.4	312.4	323.4	311.4	276.5	241.4	206.4	171.4	171.6
105°	372.1	381.0	389.9	398.8	407.6	405.3	391.5	377.7	363.9	350.2	309.1
107.5°	468.8	476.2	483.6	491.0	498.4	509.1	523.0	536.9	550.8	564.7	536.1
110°	533.2	539.8	546.4	553.0	559.6	569.3	582.2	595.0	607.9	620.7	618.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	595.6	601.2	606.8	612.4	618.0	627.0	639.5	651.9	664.4	676.9	683.2
115°	686.9	691.5	696.0	700.7	705.2	713.1	724.5	735.8	747.1	758.5	767.0
117.5°	776.2	780.0	783.8	787.7	791.4	798.2	807.7	817.3	826.9	836.5	844.5
120°	830.8	834.5	838.1	841.8	845.5	851.8	860.8	869.7	878.6	887.6	895.4
122.5°	887.4	890.1	892.7	895.3	898.0	903.7	912.5	921.2	930.0	938.7	945.7
125°	963.8	966.0	968.1	970.3	972.5	977.6	985.9	994.1	1002.3	1010.6	1016.4
127.5°	1038.9	1040.8	1042.7	1044.6	1046.5	1051.1	1058.3	1065.6	1072.8	1080.0	1085.7
130°	1085.7	1087.6	1089.5	1091.4	1093.3	1097.3	1103.3	1109.4	1115.4	1121.4	1127.2
132.5°	1129.7	1131.8	1133.8	1136.0	1138.1	1141.6	1146.4	1151.2	1156.0	1160.8	1166.4
135°	1197.9	1199.3	1200.7	1202.1	1203.5	1206.0	1209.8	1213.6	1217.4	1221.2	1226.5
137.5°	1256.2	1258.1	1260.0	1261.8	1263.6	1265.7	1267.8	1269.9	1272.0	1274.1	1279.4
140°	1294.3	1295.9	1297.5	1299.2	1300.8	1302.4	1304.0	1305.5	1307.1	1308.6	1313.4
142.5°	1330.4	1331.8	1333.3	1334.6	1336.1	1337.3	1338.2	1339.2	1340.2	1341.2	1345.3
145°	1380.9	1382.5	1384.1	1385.8	1387.5	1388.5	1389.1	1389.6	1390.2	1390.7	1393.3
147.5°	1427.3	1428.6	1429.8	1431.0	1432.2	1433.1	1433.7	1434.3	1434.8	1435.3	1436.5
150°	1456.5	1457.3	1458.2	1459.0	1459.8	1460.4	1461.0	1461.6	1462.1	1462.6	1463.1
152.5°	1482.9	1483.3	1483.6	1484.0	1484.4	1484.7	1485.1	1485.4	1485.7	1486.0	1487.0
155°	1519.9	1519.4	1518.8	1518.3	1517.8	1517.6	1517.9	1518.2	1518.4	1518.7	1520.0
157.5°	1548.7	1548.7	1548.6	1548.5	1548.5	1548.3	1548.0	1547.8	1547.5	1547.2	1548.8
160°	1566.3	1565.9	1565.7	1565.5	1565.1	1564.9	1564.6	1564.3	1564.1	1563.8	1565.5
162.5°	1582.8	1582.1	1581.4	1580.7	1580.0	1579.5	1579.2	1579.0	1578.7	1578.4	1580.3
165°	1602.8	1602.0	1601.2	1600.4	1599.5	1599.0	1598.7	1598.5	1598.2	1597.9	1600.1
167.5°	1618.4	1617.3	1616.2	1615.2	1614.0	1613.6	1613.6	1613.6	1613.6	1613.6	1615.7
170°	1627.2	1626.1	1625.0	1623.9	1622.9	1622.3	1622.3	1622.3	1622.3	1622.3	1624.5
172.5°	1633.0	1631.7	1630.4	1629.1	1627.8	1627.3	1627.5	1627.7	1627.9	1628.2	1630.4
175°	1640.5	1639.2	1637.9	1636.6	1635.2	1634.6	1634.9	1635.2	1635.4	1635.7	1637.6
177.5°	1642.5	1641.4	1640.4	1639.3	1638.2	1637.8	1638.0	1638.2	1638.4	1638.7	1640.4
180°	1640.5	1640.5	1640.5	1640.5	1640.5	1640.5	1640.5	1640.5	1640.5	1640.5	1640.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6
2.5°	1016.5	1018.1	1019.6	1020.3	1020.1	1019.9	1019.8	1019.5
5°	1014.8	1016.8	1018.8	1019.6	1019.4	1019.1	1018.9	1018.6
7.5°	1008.7	1011.2	1013.7	1014.7	1014.5	1014.2	1013.8	1013.6
10°	1002.5	1004.9	1007.5	1008.4	1008.0	1007.5	1007.0	1006.5
12.5°	994.1	996.4	998.7	999.6	999.1	998.6	998.1	997.6
15°	978.1	980.6	983.0	984.1	983.9	983.7	983.4	983.2
17.5°	957.2	959.4	961.6	962.5	962.2	961.9	961.6	961.2
20°	942.1	944.3	946.6	947.8	948.0	948.3	948.5	948.8
22.5°	925.5	928.3	931.2	932.5	932.3	932.2	932.1	931.9
25°	897.5	900.7	903.8	905.5	905.5	905.5	905.5	905.5
27.5°	868.1	870.9	873.7	875.1	875.4	875.5	875.8	876.0
30°	848.2	851.1	854.0	855.6	855.6	855.6	855.6	855.6
32.5°	826.4	829.5	832.7	834.5	835.1	835.7	836.3	836.9
35°	794.1	797.9	801.5	803.9	804.9	805.8	806.8	807.8
37.5°	760.8	764.9	769.2	771.6	772.4	773.1	774.0	774.8
40°	738.5	742.7	746.9	749.5	750.5	751.5	752.4	753.4
42.5°	715.3	719.9	724.6	727.5	728.9	730.3	731.6	733.0
45°	680.7	685.4	690.1	693.4	695.4	697.3	699.4	701.3
47.5°	645.7	651.0	656.2	659.7	661.2	662.8	664.2	665.8
50°	621.7	627.3	633.0	636.7	638.5	640.2	641.9	643.6
52.5°	597.2	603.1	608.9	612.9	615.1	617.2	619.3	621.4
55°	560.4	567.0	573.7	578.0	580.0	582.0	583.9	585.9
57.5°	522.8	529.5	536.1	540.7	543.0	545.3	547.6	549.9
60°	496.5	503.4	510.3	515.1	517.9	520.6	523.3	525.9
62.5°	471.7	478.6	485.4	490.2	492.7	495.2	497.7	500.3
65°	432.0	439.4	446.8	451.8	454.2	456.6	459.2	461.6
67.5°	392.6	400.6	408.7	413.8	415.9	418.0	420.0	422.1
70°	366.4	374.3	382.2	387.4	389.9	392.3	394.8	397.3
72.5°	340.2	348.3	356.4	361.7	364.1	366.6	369.1	371.5
75°	300.4	308.5	316.6	322.2	325.1	328.1	331.0	334.0
77.5°	263.1	271.7	280.2	285.7	287.9	290.2	292.4	294.7
80°	238.7	247.1	255.4	260.9	263.3	265.8	268.3	270.8
82.5°	216.5	224.9	233.3	238.7	241.2	243.6	246.1	248.6
85°	185.4	193.8	202.2	207.7	210.1	212.5	215.0	217.5
87.5°	164.4	173.0	181.6	187.2	189.8	192.3	194.9	197.5
90°	173.6	183.0	192.5	198.8	201.8	204.8	207.7	210.8
92.5°	169.3	179.3	189.1	195.4	198.0	200.6	203.2	205.8
95°	166.7	176.3	185.8	191.8	194.3	196.7	199.2	201.7
97.5°	160.1	169.7	179.2	185.3	188.0	190.8	193.5	196.2
100°	155.4	164.7	174.1	180.1	182.8	185.6	188.3	191.0
102.5°	171.9	172.1	172.4	174.0	176.9	179.9	182.8	185.8
105°	268.1	227.1	186.0	166.9	169.7	172.4	175.1	177.9
107.5°	507.6	479.1	450.5	419.2	385.3	351.3	317.4	283.4
110°	615.6	613.1	610.6	591.0	554.2	517.5	480.7	443.9



TEST NUMBER: P332206-930

CATALOG NUMBER: S123DIW-S1000D1535U930-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	689.6	695.9	702.3	702.5	696.5	690.5	684.5	678.5
115°	775.7	784.3	793.0	798.7	801.8	804.9	808.0	811.0
117.5°	852.6	860.5	868.6	873.7	875.9	878.0	880.1	882.2
120°	903.3	911.1	919.0	923.7	925.4	927.2	929.0	930.7
122.5°	952.8	959.8	966.7	971.2	973.1	975.1	977.1	978.9
125°	1022.1	1027.8	1033.5	1037.5	1039.8	1042.0	1044.2	1046.5
127.5°	1091.5	1097.2	1103.0	1106.4	1107.6	1108.7	1109.9	1111.0
130°	1132.9	1138.7	1144.4	1147.8	1148.8	1149.7	1150.6	1151.5
132.5°	1172.0	1177.5	1183.1	1186.3	1187.2	1188.2	1189.1	1190.0
135°	1231.7	1237.0	1242.2	1245.0	1245.5	1245.9	1246.3	1246.8
137.5°	1284.5	1289.7	1294.9	1297.9	1298.5	1299.3	1299.9	1300.6
140°	1318.2	1323.0	1327.7	1330.5	1331.1	1331.9	1332.5	1333.3
142.5°	1349.5	1353.6	1357.8	1360.2	1360.7	1361.1	1361.5	1362.0
145°	1395.7	1398.2	1400.8	1402.6	1403.5	1404.5	1405.5	1406.5
147.5°	1437.6	1438.8	1439.9	1440.2	1439.9	1439.6	1439.2	1438.8
150°	1463.7	1464.3	1464.8	1464.9	1464.6	1464.3	1464.0	1463.6
152.5°	1488.0	1489.0	1490.0	1489.9	1488.7	1487.5	1486.4	1485.2
155°	1521.4	1522.7	1524.1	1524.0	1522.3	1520.7	1519.1	1517.5
157.5°	1550.5	1552.1	1553.7	1553.5	1551.4	1549.2	1547.1	1545.0
160°	1567.1	1568.6	1570.3	1570.2	1568.2	1566.4	1564.5	1562.6
162.5°	1582.1	1584.0	1585.8	1585.8	1584.2	1582.5	1580.9	1579.2
165°	1602.2	1604.4	1606.6	1606.7	1604.8	1603.0	1601.0	1599.1
167.5°	1617.9	1620.0	1622.2	1622.2	1620.0	1617.9	1615.7	1613.6
170°	1626.6	1628.8	1631.0	1631.0	1628.8	1626.6	1624.5	1622.3
172.5°	1632.5	1634.7	1636.8	1636.7	1634.3	1632.0	1629.5	1627.2
175°	1639.5	1641.4	1643.3	1643.2	1641.0	1638.8	1636.6	1634.5
177.5°	1642.1	1643.8	1645.6	1645.4	1643.2	1641.0	1638.8	1636.7
180°	1640.5	1640.5	1640.5	1640.5	1640.5	1640.5	1640.5	1640.5

(END OF REPORT)