

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: P332855-927

Luminaire Tested: **S124DIW-S1195D1340U927-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332855-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIW-S1195D1340U927-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1195 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1340 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8104.2 lumens
Efficiency: N/A
Efficacy: 106.4 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: General Diffuse

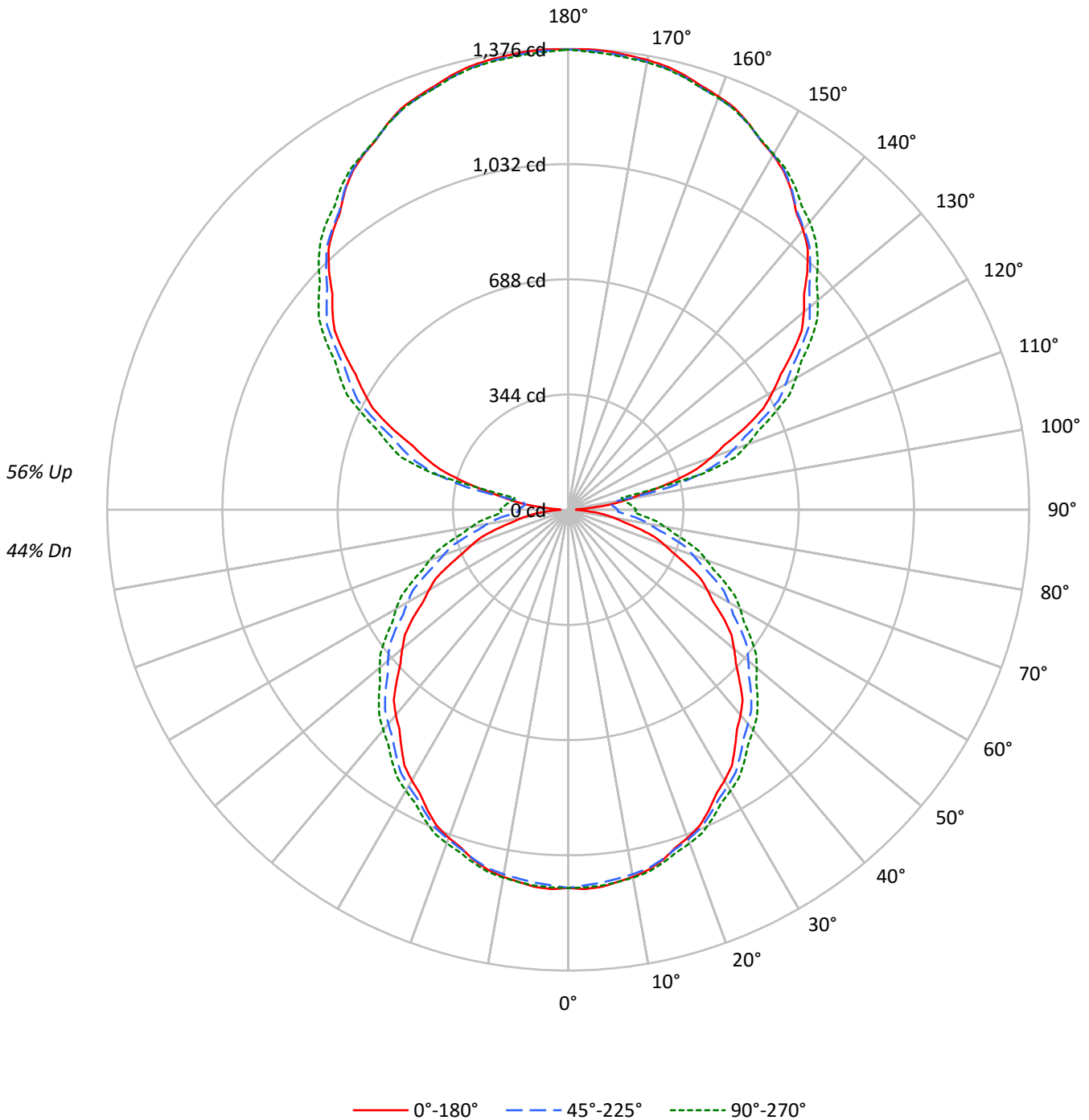
Input Watts (W): 76.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332855-927

CATALOG NUMBER: S124DIW-S1195D1340U927-4F0-1E-UDD-D

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	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51	44
1	96	91	87	83	87	83	80	76	69	66	64	55	54	52	43	42	41	35
2	87	79	72	67	79	72	67	62	60	56	52	48	45	43	38	36	34	29
3	79	69	61	55	72	63	57	51	52	47	43	42	39	36	33	30	28	24
4	72	61	53	46	65	56	49	43	46	41	37	37	33	30	29	26	24	20
5	66	54	46	40	60	50	42	37	41	36	31	33	29	26	26	23	21	17
6	61	48	40	34	55	44	37	32	37	31	27	30	26	23	24	21	18	15
7	56	43	35	30	51	40	33	28	33	28	24	27	23	20	22	18	16	13
8	52	39	31	26	47	36	29	24	30	25	21	25	21	18	20	17	14	12
9	48	36	28	23	44	33	26	22	28	22	19	23	19	16	18	15	13	11
10	45	33	25	21	41	30	24	19	26	20	17	21	17	14	17	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9120	9120	9120
5°	9147	8912	8938
10°	9092	8767	8760
15°	9010	8598	8551
20°	8888	8412	8347
25°	8749	8203	8124
30°	8599	7995	7894
35°	8429	7783	7692
40°	8293	7580	7482
45°	8093	7394	7302
50°	7922	7178	7111
55°	7746	6976	6888
60°	7471	6718	6685
65°	7170	6440	6434
70°	6805	6123	6141
75°	6298	5775	5878
80°	5734	5442	5618
85°	5012	5144	5468



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.0	1.3
10°-20°	306.5	3.8
20°-30°	463.4	5.7
30°-40°	560.7	6.9
40°-50°	592.8	7.3
50°-60°	557.9	6.9
60°-70°	462.9	5.7
70°-80°	325.1	4.0
80°-90°	187.8	2.3
90°-100°	156.1	1.9
100°-110°	380.4	4.7
110°-120°	627.3	7.7
120°-130°	758.1	9.4
130°-140°	791.6	9.8
140°-150°	730.6	9.0
150°-160°	587.0	7.2
160°-170°	378.6	4.7
170°-180°	130.5	1.6
0°-30°	876.9	10.8
0°-40°	1437.6	17.7
0°-60°	2588.3	31.9
0°-90°	3564.0	44.0
90°-120°	1163.8	14.4
90°-150°	3444.1	42.5
90°-180°	4540.0	56.0
0°-180°	8104.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1130	1130	1130	1130	1130	
5°	1131	1127	1118	1128	1127	107
15°	1084	1085	1082	1092	1092	305
25°	992	999	1003	1016	1018	457
35°	868	883	896	912	917	543
45°	724	748	772	792	800	559
55°	567	594	631	656	664	505
65°	392	433	476	506	517	389
75°	218	265	318	352	364	231
85°	67	120	177	214	228	71
90°	23	85	148	189	203	16
95°	73	82	133	171	185	86
105°	321	353	404	441	418	336
115°	585	601	639	668	678	576
125°	817	821	849	875	885	729
135°	1010	1009	1021	1043	1053	778
145°	1162	1164	1164	1173	1180	726
155°	1273	1274	1271	1275	1272	587
165°	1343	1338	1338	1345	1337	379
175°	1374	1368	1369	1377	1366	131
180°	1374	1374	1374	1374	1374	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7
2.5°	1133.7	1133.0	1132.3	1131.6	1131.0	1129.7	1127.9	1126.2	1124.3	1122.5	1124.1
5°	1130.8	1130.0	1129.2	1128.4	1127.5	1126.1	1124.1	1122.1	1120.2	1118.2	1120.5
7.5°	1121.3	1120.8	1120.2	1119.7	1119.3	1118.2	1116.6	1114.9	1113.3	1111.7	1114.2
10°	1113.2	1112.9	1112.6	1112.3	1112.1	1111.2	1109.8	1108.4	1107.0	1105.6	1108.1
12.5°	1102.0	1102.0	1101.9	1101.8	1101.8	1101.3	1100.3	1099.4	1098.4	1097.5	1099.8
15°	1084.1	1084.3	1084.7	1084.9	1085.2	1084.9	1084.1	1083.2	1082.4	1081.6	1084.1
17.5°	1059.5	1060.4	1061.2	1062.1	1062.9	1063.3	1063.1	1062.9	1062.7	1062.6	1065.2
20°	1042.4	1043.1	1044.0	1044.9	1045.7	1046.2	1046.6	1046.9	1047.1	1047.4	1050.2
22.5°	1023.1	1024.1	1025.2	1026.3	1027.4	1028.2	1028.6	1029.2	1029.7	1030.2	1033.0
25°	991.7	993.4	995.1	996.8	998.5	999.7	1000.6	1001.4	1002.3	1003.1	1006.2
27.5°	956.8	959.3	961.8	964.2	966.7	968.6	969.9	971.2	972.5	973.8	976.6
30°	933.5	935.8	938.0	940.3	942.5	944.7	946.6	948.6	950.5	952.5	955.6
32.5°	908.2	910.9	913.6	916.3	919.0	921.5	923.7	925.9	928.0	930.3	933.8
35°	867.8	871.2	874.5	877.9	881.2	884.3	887.2	889.9	892.8	895.6	899.5
37.5°	827.0	830.9	834.8	838.7	842.6	846.2	849.7	853.2	856.7	860.2	864.2
40°	800.7	804.4	808.0	811.7	815.3	819.1	823.1	827.0	830.9	834.9	839.1
42.5°	770.4	774.4	778.6	782.7	786.8	791.2	795.7	800.3	804.9	809.6	814.3
45°	723.6	728.9	734.3	739.6	744.9	750.3	755.6	761.0	766.3	771.7	776.4
47.5°	678.7	684.3	689.8	695.3	700.8	706.7	712.9	719.1	725.2	731.4	736.3
50°	646.4	652.6	658.8	665.0	671.1	677.3	683.5	689.7	695.9	702.0	707.7
52.5°	614.0	620.2	626.4	632.6	638.7	645.4	652.4	659.6	666.6	673.8	679.4
55°	566.7	572.6	578.5	584.4	590.3	597.5	605.9	614.3	622.8	631.2	636.8
57.5°	513.8	521.2	528.5	535.8	543.0	550.9	559.3	567.7	576.1	584.4	591.1
60°	479.4	486.7	494.0	501.4	508.7	517.0	526.2	535.5	544.8	554.1	560.5
62.5°	446.0	454.0	462.0	470.0	477.9	486.6	495.9	505.2	514.4	523.7	530.1
65°	392.1	401.2	410.1	419.1	428.1	437.4	446.9	456.5	466.0	475.6	482.7
67.5°	340.2	349.8	359.4	368.9	378.5	388.4	398.6	408.8	419.1	429.4	436.5
70°	304.8	314.4	324.0	333.5	343.1	353.2	363.8	374.5	385.2	395.9	403.5
72.5°	270.5	280.2	290.0	299.8	309.6	320.1	331.5	342.9	354.2	365.6	373.0
75°	217.6	228.0	238.4	248.7	259.2	270.3	282.1	293.9	305.7	317.5	325.3
77.5°	168.3	179.3	190.3	201.3	212.3	224.0	236.4	248.7	261.1	273.5	281.5
80°	137.9	149.1	160.3	171.6	182.8	194.6	207.0	219.4	231.8	244.2	252.5
82.5°	107.5	119.2	130.9	142.6	154.3	166.4	178.7	191.1	203.4	215.8	224.4
85°	67.0	78.8	90.6	102.4	114.2	126.5	139.1	151.8	164.5	177.1	185.5
87.5°	38.0	50.1	62.0	74.0	86.0	98.2	111.0	123.7	136.3	149.0	157.4
90°	23.3	37.1	50.9	64.6	78.3	92.2	106.1	120.0	134.0	147.8	157.3
92.5°	32.2	42.5	52.7	63.0	73.2	85.3	99.2	113.1	127.1	140.9	150.3
95°	73.0	74.5	76.0	77.5	79.0	85.6	97.4	109.2	120.9	132.7	141.6
97.5°	134.9	147.7	160.6	173.4	186.2	185.6	171.5	157.5	143.4	129.4	136.8
100°	182.4	193.8	205.3	216.7	228.1	223.6	203.0	182.4	161.9	141.3	145.0
102.5°	236.7	246.1	255.6	265.0	274.3	282.4	289.0	295.6	302.3	308.9	274.4
105°	320.7	327.6	334.6	341.7	348.6	357.9	369.5	381.0	392.5	404.1	413.1
107.5°	400.8	406.1	411.4	416.6	421.9	430.3	441.6	453.0	464.5	475.9	483.8
110°	454.0	458.6	463.3	467.9	472.5	480.4	491.6	502.8	514.0	525.2	532.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	505.6	510.3	515.0	519.8	524.5	531.9	541.9	551.9	561.9	572.0	578.1
115°	585.0	588.3	591.4	594.7	597.9	603.9	612.7	621.5	630.2	639.0	645.6
117.5°	657.7	660.2	662.6	665.0	667.5	673.1	682.0	690.9	699.7	708.6	714.4
120°	706.1	707.8	709.6	711.3	713.0	718.0	725.9	733.8	741.7	749.6	755.7
122.5°	752.1	752.8	753.5	754.2	754.9	759.3	767.3	775.4	783.4	791.4	797.3
125°	816.8	817.5	818.1	818.7	819.4	822.9	829.5	836.1	842.6	849.2	855.2
127.5°	879.0	878.9	878.9	878.8	878.8	882.0	888.4	894.9	901.3	907.8	912.7
130°	918.3	918.2	918.1	918.1	918.1	920.6	925.8	931.0	936.2	941.4	946.7
132.5°	955.3	955.4	955.5	955.7	955.8	958.1	962.6	967.0	971.5	976.0	981.0
135°	1009.5	1009.2	1009.0	1008.8	1008.6	1009.9	1012.8	1015.7	1018.5	1021.4	1026.4
137.5°	1058.6	1058.4	1058.2	1058.0	1057.9	1058.8	1060.7	1062.6	1064.6	1066.6	1071.2
140°	1090.7	1090.8	1091.0	1091.2	1091.4	1091.8	1092.6	1093.3	1094.0	1094.8	1099.1
142.5°	1118.4	1119.2	1120.0	1120.7	1121.5	1121.9	1122.0	1122.1	1122.2	1122.4	1126.0
145°	1162.4	1162.8	1163.2	1163.6	1164.0	1164.2	1164.2	1164.2	1164.2	1164.2	1166.1
147.5°	1197.5	1198.5	1199.4	1200.5	1201.5	1201.9	1201.7	1201.4	1201.2	1200.9	1201.3
150°	1223.0	1223.6	1224.2	1224.9	1225.5	1225.7	1225.5	1225.3	1225.0	1224.8	1224.8
152.5°	1243.3	1244.0	1244.7	1245.4	1246.0	1246.2	1245.8	1245.3	1244.9	1244.5	1244.9
155°	1273.1	1273.3	1273.5	1273.7	1274.0	1273.7	1273.1	1272.4	1271.7	1271.1	1271.9
157.5°	1298.4	1298.2	1298.1	1297.9	1297.8	1297.4	1296.6	1295.8	1295.1	1294.3	1295.5
160°	1313.1	1312.5	1311.8	1311.1	1310.4	1310.0	1309.7	1309.5	1309.2	1309.1	1310.4
162.5°	1326.3	1325.4	1324.6	1323.7	1322.9	1322.3	1322.1	1321.8	1321.6	1321.4	1322.7
165°	1343.0	1341.8	1340.7	1339.5	1338.4	1337.8	1337.8	1337.8	1337.8	1337.8	1339.7
167.5°	1356.1	1354.9	1353.8	1352.6	1351.4	1350.7	1350.6	1350.4	1350.3	1350.1	1352.2
170°	1363.5	1362.2	1360.7	1359.4	1358.0	1357.5	1357.6	1357.9	1358.1	1358.4	1360.2
172.5°	1368.4	1367.1	1365.7	1364.3	1362.9	1362.4	1362.6	1362.9	1363.0	1363.3	1365.1
175°	1373.8	1372.4	1371.0	1369.7	1368.3	1367.7	1367.9	1368.2	1368.4	1368.7	1370.7
177.5°	1376.3	1375.0	1373.6	1372.4	1371.1	1370.6	1371.0	1371.4	1371.7	1372.1	1373.6
180°	1373.8	1373.8	1373.8	1373.8	1373.8	1373.8	1373.8	1373.8	1373.8	1373.8	1373.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7
2.5°	1125.7	1127.3	1128.9	1129.5	1129.3	1129.0	1128.9	1128.6
5°	1122.8	1125.0	1127.2	1128.2	1127.9	1127.7	1127.4	1127.1
7.5°	1116.7	1119.3	1121.8	1122.9	1122.6	1122.4	1122.0	1121.8
10°	1110.6	1113.2	1115.7	1116.8	1116.6	1116.3	1115.9	1115.7
12.5°	1102.1	1104.4	1106.7	1107.9	1107.8	1107.7	1107.6	1107.6
15°	1086.6	1089.2	1091.6	1092.8	1092.5	1092.3	1091.9	1091.6
17.5°	1067.8	1070.3	1072.9	1074.1	1073.9	1073.6	1073.4	1073.2
20°	1053.0	1055.8	1058.7	1060.0	1060.0	1060.0	1060.0	1060.0
22.5°	1035.8	1038.6	1041.4	1043.1	1043.5	1043.9	1044.4	1044.9
25°	1009.3	1012.4	1015.5	1017.2	1017.5	1017.7	1018.0	1018.3
27.5°	979.5	982.4	985.2	986.8	987.2	987.5	987.9	988.2
30°	958.7	961.8	964.9	966.7	967.3	967.8	968.4	969.0
32.5°	937.3	940.9	944.4	946.5	947.1	947.6	948.2	948.7
35°	903.5	907.4	911.3	913.7	914.6	915.4	916.2	917.1
37.5°	868.2	872.1	876.2	878.6	879.5	880.4	881.3	882.2
40°	843.3	847.6	851.8	854.4	855.6	856.7	857.8	858.9
42.5°	818.9	823.6	828.2	831.0	831.9	832.8	833.7	834.6
45°	781.2	786.0	790.8	793.8	795.3	796.6	798.0	799.5
47.5°	741.3	746.2	751.2	754.5	756.2	757.9	759.5	761.3
50°	713.3	718.9	724.5	728.2	729.9	731.6	733.2	734.9
52.5°	685.0	690.6	696.2	699.9	701.6	703.2	704.9	706.6
55°	642.5	648.1	653.7	657.4	659.0	660.8	662.4	664.1
57.5°	597.8	604.5	611.2	615.3	616.9	618.5	620.0	621.6
60°	567.0	573.5	579.9	584.2	586.5	588.7	591.0	593.3
62.5°	536.6	543.1	549.5	553.9	556.2	558.4	560.6	562.9
65°	489.6	496.7	503.7	508.3	510.6	512.9	515.2	517.4
67.5°	443.6	450.8	457.9	462.6	464.8	466.9	469.1	471.3
70°	411.1	418.7	426.3	431.1	433.0	435.0	437.0	438.9
72.5°	380.3	387.7	395.1	399.8	402.0	404.2	406.4	408.6
75°	333.3	341.1	349.0	354.2	356.7	359.3	361.8	364.3
77.5°	289.5	297.5	305.4	310.8	313.5	316.2	318.9	321.5
80°	261.0	269.4	277.9	283.2	285.4	287.7	289.9	292.2
82.5°	233.1	241.8	250.4	256.0	258.5	260.9	263.4	265.9
85°	193.9	202.4	210.8	216.4	219.3	222.0	224.9	227.7
87.5°	165.8	174.3	182.7	188.1	190.8	193.3	195.9	198.4
90°	166.9	176.4	185.9	192.0	194.7	197.4	200.2	202.9
92.5°	159.5	168.8	178.2	183.9	186.3	188.6	191.0	193.3
95°	150.6	159.5	168.5	174.4	177.1	179.9	182.6	185.4
97.5°	144.3	151.9	159.3	164.4	167.1	169.7	172.4	175.0
100°	148.8	152.5	156.2	159.1	161.4	163.5	165.7	167.9
102.5°	239.9	205.4	170.9	154.7	156.9	159.2	161.4	163.7
105°	422.2	431.3	440.4	442.0	436.0	430.0	424.1	418.0
107.5°	491.7	499.6	507.6	512.9	515.8	518.7	521.6	524.5
110°	539.1	546.0	552.9	557.9	560.8	563.7	566.6	569.6



TEST NUMBER: P332855-927

CATALOG NUMBER: S124DIW-S1195D1340U927-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	584.2	590.4	596.6	601.2	604.3	607.4	610.5	613.6
115°	652.3	658.9	665.5	669.9	671.8	673.8	675.7	677.7
117.5°	720.2	725.9	731.7	735.6	737.8	740.0	742.1	744.3
120°	761.8	767.9	774.0	777.8	779.7	781.5	783.2	785.1
122.5°	803.2	809.1	815.0	818.7	820.3	821.9	823.4	825.0
125°	861.3	867.3	873.3	877.3	879.2	881.1	883.0	884.9
127.5°	917.7	922.6	927.5	930.8	932.6	934.2	936.0	937.7
130°	952.0	957.2	962.5	966.0	967.7	969.4	971.1	972.7
132.5°	986.1	991.1	996.2	999.5	1001.0	1002.5	1004.0	1005.5
135°	1031.3	1036.3	1041.2	1044.8	1046.9	1049.1	1051.2	1053.4
137.5°	1075.8	1080.4	1085.0	1087.9	1089.2	1090.4	1091.7	1093.0
140°	1103.4	1107.8	1112.1	1115.1	1116.7	1118.4	1120.0	1121.7
142.5°	1129.7	1133.5	1137.2	1139.6	1140.8	1142.1	1143.3	1144.5
145°	1168.0	1169.9	1171.8	1173.5	1175.1	1176.7	1178.3	1179.9
147.5°	1201.7	1202.1	1202.6	1203.3	1204.5	1205.6	1206.7	1207.8
150°	1224.8	1224.8	1224.8	1224.9	1225.1	1225.3	1225.6	1225.8
152.5°	1245.2	1245.6	1245.9	1246.1	1245.9	1245.8	1245.7	1245.5
155°	1272.9	1273.7	1274.7	1274.8	1274.1	1273.4	1272.7	1272.1
157.5°	1296.6	1297.8	1299.0	1299.0	1297.8	1296.6	1295.5	1294.3
160°	1311.8	1313.1	1314.5	1314.5	1313.1	1311.8	1310.4	1309.1
162.5°	1324.1	1325.5	1326.8	1326.7	1325.2	1323.7	1322.1	1320.6
165°	1341.5	1343.3	1345.1	1345.0	1343.0	1340.9	1338.9	1336.8
167.5°	1354.2	1356.1	1358.2	1358.0	1355.7	1353.4	1351.2	1348.9
170°	1362.0	1363.8	1365.6	1365.4	1363.2	1360.9	1358.6	1356.3
172.5°	1366.9	1368.8	1370.6	1370.3	1367.8	1365.3	1362.9	1360.4
175°	1372.8	1374.8	1376.9	1376.5	1373.8	1371.0	1368.3	1365.6
177.5°	1375.1	1376.5	1378.0	1377.6	1375.4	1373.2	1371.0	1368.8
180°	1373.8	1373.8	1373.8	1373.8	1373.8	1373.8	1373.8	1373.8

(END OF REPORT)