

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: P331612-930

Luminaire Tested: **S122DIW-S1005D1440U930-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331612-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S1005D1440U930-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1440 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7367.5 lumens
Efficiency: N/A
Efficacy: 88.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

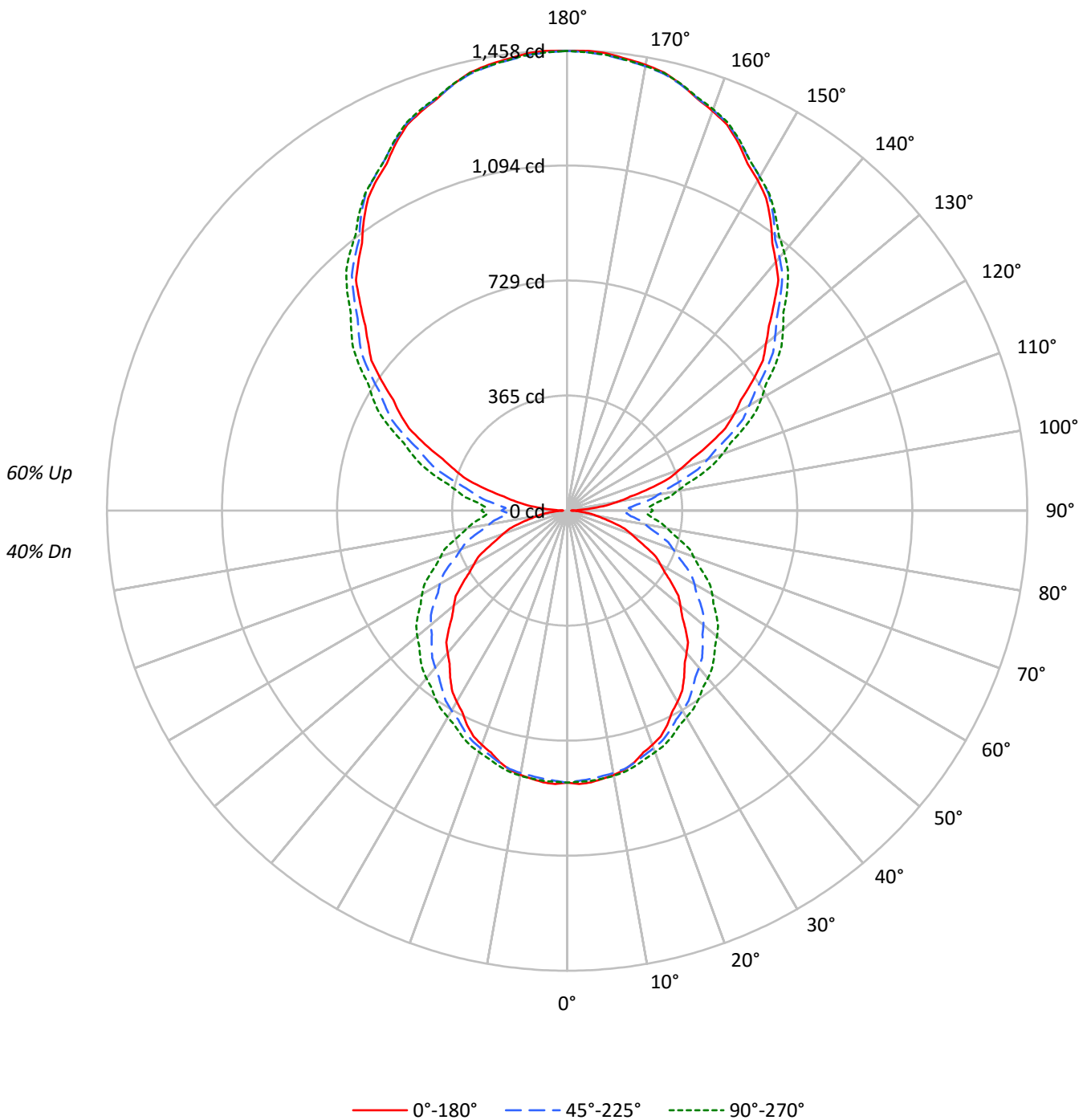
Input Watts (W): 82.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	105	105	105	105	95	95	95	95	78	78	78	62	62	62	47	47	47	40
1	94	89	85	81	85	81	78	74	66	64	61	52	50	49	39	38	37	31
2	85	77	71	65	77	70	65	60	57	53	50	45	42	40	34	32	30	25
3	78	68	60	54	70	62	55	50	50	45	41	39	36	33	30	27	25	21
4	71	60	51	45	64	54	47	42	44	39	35	35	31	28	26	24	21	17
5	65	53	44	38	58	48	41	35	39	34	30	31	27	24	24	21	18	15
6	59	47	39	33	54	43	36	31	35	30	26	28	24	21	21	18	16	13
7	55	42	34	29	50	39	32	27	32	26	22	25	21	18	19	16	14	11
8	51	38	31	25	46	35	28	23	29	24	20	23	19	16	18	15	13	10
9	47	35	27	22	43	32	25	21	26	21	18	21	17	14	16	13	11	9
10	44	32	25	20	40	29	23	18	24	19	16	20	16	13	15	12	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13919	13919	13919
5°	13988	13400	13350
10°	13899	13004	12858
15°	13709	12584	12339
20°	13467	12136	11842
25°	13227	11701	11390
30°	12890	11257	10936
35°	12550	10828	10617
40°	12191	10461	10297
45°	11850	10133	10022
50°	11485	9837	9754
55°	11101	9519	9479
60°	10631	9187	9189
65°	10145	8801	8846
70°	9596	8384	8474
75°	8897	7976	8132
80°	7792	7559	7784
85°	6733	7197	7515



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.7	1.1
10°-20°	234.3	3.2
20°-30°	355.0	4.8
30°-40°	432.4	5.9
40°-50°	465.2	6.3
50°-60°	451.7	6.1
60°-70°	394.4	5.4
70°-80°	303.7	4.1
80°-90°	209.6	2.8
90°-100°	232.7	3.2
100°-110°	389.2	5.3
110°-120°	557.7	7.6
120°-130°	682.1	9.3
130°-140°	739.0	10.0
140°-150°	711.9	9.7
150°-160°	594.8	8.1
160°-170°	394.5	5.4
170°-180°	137.9	1.9
0°-30°	670.9	9.1
0°-40°	1103.3	15.0
0°-60°	2020.2	27.4
0°-90°	2927.9	39.7
90°-120°	1179.5	16.0
90°-150°	3312.6	45.0
90°-180°	4440.0	60.3
0°-180°	7367.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	862	862	862	862	862	
5°	865	861	853	860	860	82
15°	825	827	827	838	837	232
25°	750	759	770	784	788	345
35°	646	667	691	717	727	404
45°	530	564	607	644	658	409
55°	406	452	516	559	577	363
65°	277	339	412	462	480	275
75°	154	224	304	355	374	163
85°	45	123	202	253	272	48
90°	14	102	208	254	272	12
95°	74	145	222	268	282	81
105°	270	312	378	422	438	286
115°	497	520	572	606	618	491
125°	718	730	765	794	805	642
135°	927	940	955	979	987	716
145°	1123	1132	1139	1148	1149	702
155°	1284	1288	1292	1297	1294	591
165°	1398	1396	1396	1404	1399	394
175°	1454	1450	1448	1456	1449	138
180°	1456	1456	1456	1456	1456	



TEST NUMBER: P331612-930

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	862.1	862.1	862.1	862.1	862.1	862.1	862.1	862.1	862.1	862.1	862.1
2.5°	867.2	866.5	865.8	865.1	864.5	863.3	861.8	860.2	858.7	857.1	858.3
5°	864.6	863.8	863.0	862.1	861.3	860.1	858.4	856.7	855.1	853.4	855.1
7.5°	856.9	856.3	855.7	855.2	854.7	853.8	852.5	851.2	849.9	848.6	850.6
10°	850.9	850.4	849.8	849.2	848.6	848.0	847.2	846.3	845.5	844.7	846.9
12.5°	840.9	841.0	841.1	841.2	841.3	841.1	840.5	839.8	839.3	838.6	840.9
15°	824.7	825.2	825.7	826.3	826.9	827.1	827.1	827.1	827.1	827.1	829.6
17.5°	803.6	804.9	806.0	807.1	808.3	809.3	810.2	811.1	812.0	812.9	815.5
20°	789.7	791.1	792.5	793.9	795.2	796.5	797.6	798.7	799.8	801.0	804.0
22.5°	774.7	776.2	777.9	779.5	781.1	782.7	784.2	785.8	787.3	788.9	792.0
25°	749.7	751.6	753.6	755.5	757.5	759.7	762.1	764.7	767.2	769.6	773.0
27.5°	719.7	722.8	726.0	729.2	732.4	735.4	738.3	741.3	744.2	747.2	751.4
30°	699.7	703.3	706.9	710.5	714.1	717.8	721.4	725.0	728.6	732.2	736.6
32.5°	677.7	681.8	685.8	689.9	693.9	698.1	702.4	706.6	710.9	715.2	720.3
35°	646.0	650.7	655.4	660.1	664.9	669.8	675.1	680.4	685.7	691.0	697.1
37.5°	611.5	616.9	622.4	627.8	633.2	639.4	646.2	653.1	659.9	666.8	673.5
40°	588.5	594.6	600.7	606.8	612.9	619.7	627.2	634.7	642.2	649.7	657.0
42.5°	566.6	572.6	578.7	584.8	590.9	598.3	606.9	615.6	624.1	632.8	640.6
45°	529.8	537.3	544.8	552.3	559.8	568.3	578.1	587.8	597.5	607.2	615.9
47.5°	493.6	501.7	509.9	518.0	526.2	536.0	547.4	558.7	570.1	581.5	590.5
50°	468.6	477.2	485.8	494.4	503.0	513.6	526.0	538.5	551.0	563.5	573.0
52.5°	444.6	453.6	462.7	471.7	480.8	491.9	505.0	518.2	531.3	544.5	554.2
55°	406.1	416.0	426.1	436.1	446.1	458.3	472.7	487.1	501.6	516.0	526.0
57.5°	368.1	379.4	390.6	401.9	413.2	426.2	440.9	455.6	470.3	485.0	495.8
60°	341.1	353.0	365.0	376.9	388.9	402.8	418.6	434.4	450.2	466.0	476.6
62.5°	317.2	329.5	341.9	354.2	366.6	380.7	396.6	412.4	428.3	444.1	455.3
65°	277.4	291.0	304.6	318.2	331.8	346.8	363.2	379.5	395.9	412.3	423.7
67.5°	240.9	255.1	269.3	283.6	297.7	313.2	330.0	346.8	363.5	380.3	391.8
70°	214.9	229.3	243.8	258.2	272.6	288.5	305.7	322.9	340.1	357.3	369.2
72.5°	190.9	205.8	220.7	235.5	250.5	266.6	284.1	301.5	318.9	336.4	348.1
75°	153.7	169.3	184.7	200.3	215.9	232.5	250.3	268.1	285.8	303.6	315.5
77.5°	117.7	134.0	150.3	166.5	182.8	199.9	218.0	236.0	254.0	272.1	284.1
80°	93.7	110.6	127.6	144.6	161.4	179.0	197.0	215.1	233.1	251.1	262.8
82.5°	73.7	90.4	107.1	123.8	140.6	158.1	176.3	194.6	212.9	231.1	242.8
85°	45.0	62.2	79.4	96.6	113.8	131.3	149.1	166.9	184.7	202.4	214.1
87.5°	24.7	41.9	59.1	76.3	93.5	111.6	130.6	149.6	168.5	187.5	198.8
90°	13.7	33.1	52.5	71.9	91.2	112.8	136.6	160.4	184.2	208.0	218.5
92.5°	33.3	50.8	68.2	85.5	103.0	120.9	139.4	158.0	176.5	195.0	206.0
95°	73.9	89.7	105.5	121.2	137.1	153.5	170.7	187.9	205.1	222.3	232.9
97.5°	125.5	139.5	153.5	167.5	181.6	197.1	214.1	231.1	248.2	265.2	275.5
100°	164.9	177.3	189.7	202.2	214.7	229.1	245.5	261.8	278.2	294.6	304.8
102.5°	205.1	216.3	227.4	238.6	249.6	263.3	279.5	295.6	311.8	327.9	338.2
105°	270.5	279.4	288.3	297.1	306.0	317.9	332.9	347.9	362.9	377.9	388.2
107.5°	337.6	345.3	352.9	360.5	368.2	379.0	392.7	406.6	420.4	434.2	443.8
110°	379.8	387.1	394.3	401.5	408.6	419.1	432.7	446.3	459.8	473.4	482.3



TEST NUMBER: P331612-930

CATALOG NUMBER: S122DIW-S1005D1440U930-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	427.1	433.4	439.7	446.0	452.3	461.8	474.5	487.2	499.9	512.7	520.9
115°	496.7	501.3	506.1	510.7	515.4	523.7	535.7	547.6	559.6	571.5	579.6
117.5°	564.7	568.9	573.1	577.2	581.5	588.6	598.6	608.6	618.6	628.7	636.2
120°	610.9	614.2	617.5	620.9	624.1	630.2	639.1	648.1	657.0	665.9	673.7
122.5°	653.2	656.3	659.3	662.4	665.4	671.5	680.4	689.3	698.2	707.1	714.0
125°	717.9	720.3	722.8	725.2	727.7	733.0	741.0	749.1	757.2	765.2	771.8
127.5°	782.0	784.8	787.7	790.5	793.4	797.9	804.0	810.2	816.4	822.6	828.5
130°	822.3	825.6	828.8	832.2	835.4	839.7	845.0	850.3	855.6	860.8	866.9
132.5°	867.6	870.2	872.8	875.4	878.0	881.7	886.2	890.9	895.4	900.1	905.3
135°	926.8	929.8	932.8	935.8	938.8	941.9	945.3	948.6	951.9	955.2	960.8
137.5°	990.4	992.9	995.2	997.7	1000.0	1002.2	1004.1	1006.1	1008.0	1009.9	1014.8
140°	1028.8	1030.9	1033.1	1035.3	1037.5	1039.6	1041.5	1043.4	1045.3	1047.3	1051.7
142.5°	1068.1	1070.3	1072.4	1074.6	1076.8	1078.5	1079.5	1080.5	1081.6	1082.6	1086.4
145°	1123.4	1125.4	1127.2	1129.1	1131.1	1132.9	1134.5	1136.1	1137.8	1139.4	1141.3
147.5°	1173.8	1176.1	1178.4	1180.7	1183.0	1184.7	1185.8	1186.8	1188.0	1189.0	1189.8
150°	1208.2	1209.8	1211.5	1213.2	1214.8	1216.1	1217.2	1218.3	1219.4	1220.5	1221.3
152.5°	1238.7	1240.3	1241.9	1243.6	1245.3	1246.8	1248.1	1249.4	1250.7	1252.0	1253.0
155°	1284.4	1285.2	1286.1	1286.9	1287.7	1288.5	1289.3	1290.1	1290.9	1291.8	1293.1
157.5°	1323.5	1324.0	1324.6	1325.2	1325.7	1326.2	1326.7	1327.2	1327.7	1328.2	1330.0
160°	1347.1	1347.7	1348.2	1348.7	1349.3	1349.7	1350.0	1350.2	1350.5	1350.8	1352.4
162.5°	1368.7	1368.9	1369.0	1369.1	1369.2	1369.4	1369.6	1369.9	1370.2	1370.4	1372.3
165°	1397.5	1397.3	1396.9	1396.7	1396.4	1396.3	1396.3	1396.3	1396.3	1396.3	1398.2
167.5°	1421.6	1420.7	1419.9	1419.1	1418.3	1417.9	1417.8	1417.8	1417.7	1417.6	1419.6
170°	1434.4	1433.5	1432.7	1431.9	1431.1	1430.5	1430.3	1430.0	1429.7	1429.5	1431.3
172.5°	1443.2	1442.4	1441.6	1440.8	1440.0	1439.4	1439.2	1438.8	1438.6	1438.3	1440.2
175°	1454.0	1453.2	1452.4	1451.6	1450.7	1450.1	1449.5	1448.9	1448.5	1447.9	1449.8
177.5°	1458.5	1457.8	1457.2	1456.5	1455.9	1455.3	1454.8	1454.4	1454.0	1453.5	1454.8
180°	1456.5	1456.5	1456.5	1456.5	1456.5	1456.5	1456.5	1456.5	1456.5	1456.5	1456.5



TEST NUMBER: P331612-930

CATALOG NUMBER: S122DIW-S1005D1440U930-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	862.1	862.1	862.1	862.1	862.1	862.1	862.1	862.1
2.5°	859.3	860.5	861.6	861.9	861.4	861.0	860.5	860.1
5°	856.7	858.4	860.1	860.7	860.5	860.2	859.9	859.7
7.5°	852.6	854.7	856.6	857.5	857.2	857.0	856.6	856.4
10°	849.1	851.3	853.5	854.5	854.2	853.9	853.7	853.4
12.5°	843.1	845.3	847.5	848.5	848.2	847.9	847.7	847.4
15°	832.2	834.6	837.1	838.3	838.0	837.7	837.4	837.1
17.5°	818.2	820.8	823.4	824.7	824.7	824.7	824.7	824.7
20°	807.0	810.1	813.1	814.6	814.6	814.6	814.6	814.6
22.5°	795.0	798.1	801.1	802.9	803.3	803.8	804.2	804.7
25°	776.3	779.7	783.0	785.1	785.9	786.8	787.6	788.4
27.5°	755.6	759.9	764.1	766.5	767.1	767.7	768.3	768.9
30°	741.1	745.5	750.0	752.6	753.4	754.2	755.1	755.9
32.5°	725.5	730.5	735.6	738.9	740.5	741.9	743.5	744.9
35°	703.2	709.3	715.4	719.4	721.4	723.3	725.3	727.2
37.5°	680.3	687.1	693.8	698.2	700.3	702.4	704.4	706.5
40°	664.1	671.4	678.6	683.5	686.0	688.4	691.0	693.5
42.5°	648.5	656.4	664.3	669.4	672.0	674.5	676.9	679.5
45°	624.4	633.1	641.6	647.3	650.1	652.9	655.7	658.4
47.5°	599.5	608.5	617.5	623.5	626.6	629.7	632.7	635.8
50°	582.4	591.8	601.3	607.6	610.6	613.6	616.7	619.7
52.5°	563.9	573.5	583.2	589.6	592.9	596.2	599.5	602.8
55°	536.1	546.0	556.0	562.8	566.4	570.1	573.6	577.2
57.5°	506.6	517.4	528.2	535.3	539.0	542.7	546.3	550.0
60°	487.1	497.7	508.3	515.5	519.3	523.3	527.2	531.0
62.5°	466.5	477.7	488.9	496.4	500.0	503.7	507.4	511.0
65°	435.1	446.5	457.9	465.4	469.0	472.5	476.2	479.8
67.5°	403.3	414.8	426.3	434.0	437.7	441.5	445.3	449.1
70°	381.2	393.1	405.1	412.7	416.0	419.4	422.7	426.1
72.5°	359.8	371.5	383.2	391.1	395.1	399.1	403.1	407.1
75°	327.5	339.4	351.4	359.1	362.7	366.4	370.0	373.6
77.5°	295.9	307.8	319.7	327.6	331.4	335.3	339.2	343.1
80°	274.4	286.2	297.8	305.6	309.5	313.3	317.2	321.1
82.5°	254.5	266.1	277.8	285.4	289.1	292.8	296.4	300.1
85°	225.8	237.4	249.1	256.8	260.7	264.6	268.5	272.4
87.5°	209.9	221.2	232.4	239.8	243.4	247.0	250.6	254.3
90°	229.1	239.6	250.2	257.3	260.9	264.5	268.1	271.7
92.5°	217.0	228.0	239.0	246.2	249.6	253.0	256.3	259.8
95°	243.4	254.0	264.6	271.3	274.0	276.8	279.6	282.3
97.5°	285.8	296.0	306.3	313.1	316.3	319.5	322.7	326.0
100°	315.1	325.4	335.7	342.2	345.0	347.7	350.5	353.4
102.5°	348.5	358.7	368.9	375.5	378.3	381.1	383.8	386.6
105°	398.4	408.6	418.9	425.6	428.6	431.7	434.7	437.8
107.5°	453.3	462.8	472.4	478.1	479.9	481.7	483.5	485.3
110°	491.2	500.1	509.0	514.5	516.8	519.0	521.3	523.5



TEST NUMBER: P331612-930

CATALOG NUMBER: S122DIW-S1005D1440U930-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	529.1	537.4	545.6	551.0	553.4	555.9	558.3	560.8
115°	587.7	595.7	603.7	608.9	611.1	613.3	615.6	617.8
117.5°	643.8	651.3	658.9	663.7	665.7	667.7	669.7	671.7
120°	681.4	689.3	697.0	702.0	704.3	706.5	708.7	710.9
122.5°	720.9	727.8	734.7	739.2	741.2	743.1	745.2	747.2
125°	778.5	785.2	791.9	796.4	798.6	800.8	803.1	805.3
127.5°	834.4	840.2	846.2	849.9	851.5	853.0	854.6	856.2
130°	873.0	879.2	885.3	888.9	890.1	891.2	892.3	893.4
132.5°	910.5	915.7	921.0	924.3	925.7	927.0	928.4	929.7
135°	966.4	971.9	977.5	981.0	982.4	983.7	985.1	986.6
137.5°	1019.7	1024.6	1029.5	1032.3	1033.1	1034.0	1034.7	1035.5
140°	1056.1	1060.5	1065.0	1067.6	1068.1	1068.7	1069.3	1069.8
142.5°	1090.1	1094.0	1097.7	1099.8	1100.1	1100.5	1100.8	1101.1
145°	1143.3	1145.2	1147.1	1148.3	1148.6	1148.8	1149.2	1149.4
147.5°	1190.7	1191.5	1192.4	1192.5	1192.2	1191.8	1191.5	1191.1
150°	1222.1	1222.9	1223.8	1223.8	1222.9	1222.1	1221.3	1220.5
152.5°	1254.0	1255.1	1256.1	1256.1	1255.1	1254.0	1253.0	1252.0
155°	1294.5	1295.9	1297.2	1297.5	1296.7	1295.9	1295.1	1294.3
157.5°	1331.9	1333.7	1335.6	1335.9	1334.6	1333.3	1332.0	1330.6
160°	1354.0	1355.7	1357.3	1357.6	1356.5	1355.4	1354.4	1353.2
162.5°	1374.2	1376.1	1377.9	1378.2	1376.9	1375.6	1374.3	1372.9
165°	1400.1	1402.0	1403.9	1404.2	1402.8	1401.5	1400.1	1398.7
167.5°	1421.5	1423.4	1425.3	1425.6	1424.2	1422.7	1421.3	1419.8
170°	1433.3	1435.2	1437.1	1437.2	1435.6	1433.9	1432.3	1430.7
172.5°	1442.1	1444.1	1445.9	1446.1	1444.5	1442.8	1441.2	1439.6
175°	1451.7	1453.6	1455.6	1455.7	1454.0	1452.4	1450.7	1449.1
177.5°	1456.2	1457.5	1458.8	1458.8	1457.5	1456.2	1454.8	1453.5
180°	1456.5	1456.5	1456.5	1456.5	1456.5	1456.5	1456.5	1456.5

(END OF REPORT)