

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: P332789-840

Luminaire Tested: **S124DIW-S795D1050U840-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332789-840
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-S795D1050U840-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1050 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7505.4 lumens
Efficiency: N/A
Efficacy: 142.7 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

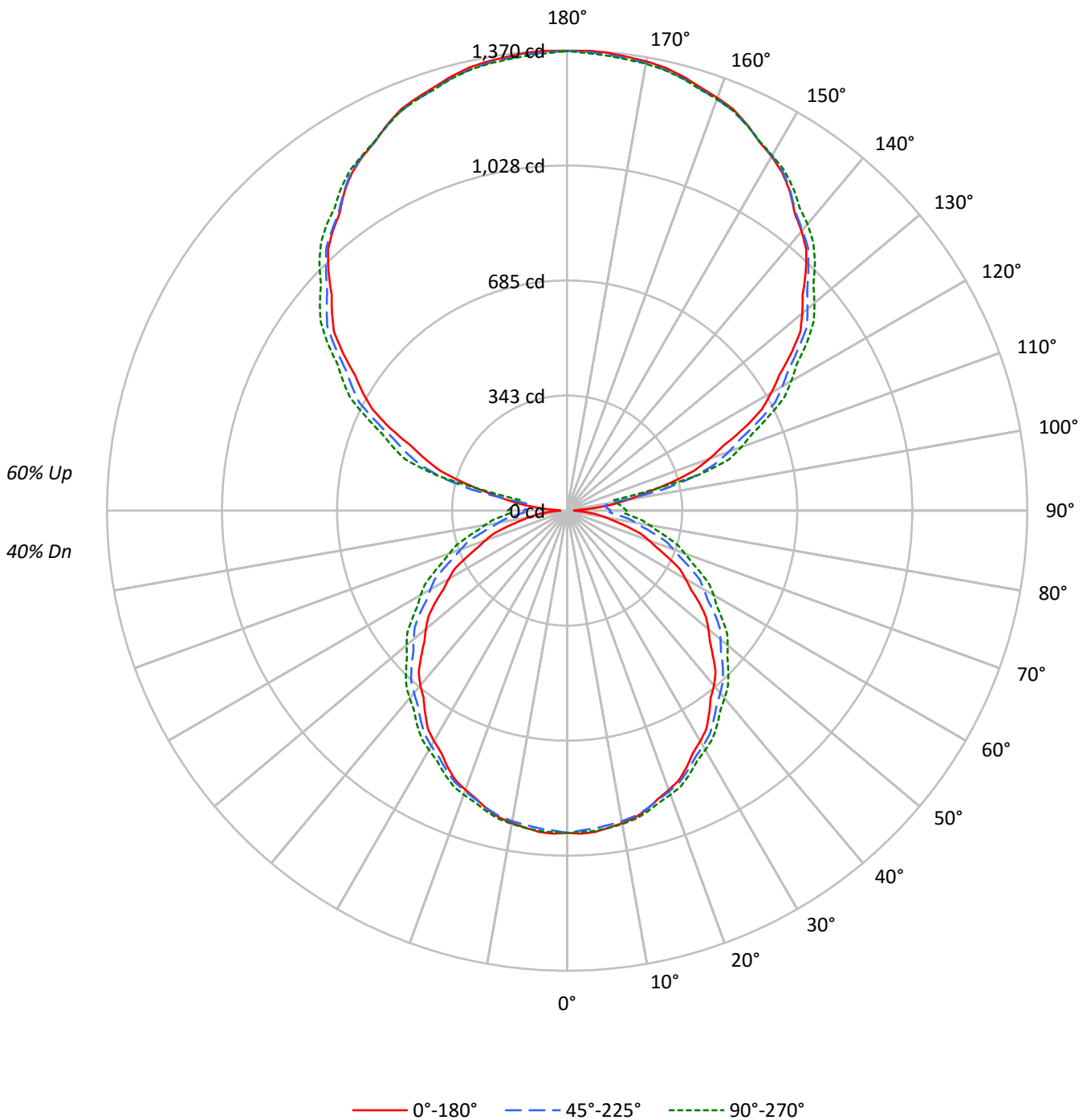
Input Watts (W): 52.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332789-840

CATALOG NUMBER: S124DIW-S795D1050U840-4F0-1E-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	105	105	105	105	95	95	95	95	78	78	78	62	62	62	47	47	47	40
1	95	90	86	82	86	82	79	75	67	65	62	53	51	50	40	39	38	32
2	86	78	72	66	78	71	66	61	58	54	51	46	43	41	35	33	32	26
3	78	68	61	55	71	62	56	51	51	46	42	41	37	34	31	28	26	22
4	71	60	52	46	65	55	48	43	45	40	36	36	32	29	27	25	23	19
5	65	54	45	39	59	49	42	36	40	35	31	32	28	25	24	22	19	16
6	60	48	40	34	54	44	37	31	36	31	26	29	25	22	22	19	17	14
7	55	43	35	29	50	39	32	27	33	27	23	26	22	19	20	17	15	12
8	51	39	31	26	47	36	29	24	30	24	20	24	20	17	18	16	13	11
9	48	35	28	23	43	33	26	21	27	22	18	22	18	15	17	14	12	10
10	45	32	25	20	40	30	23	19	25	20	16	20	16	14	16	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7744	7744	7744
5°	7768	7569	7589
10°	7720	7444	7439
15°	7651	7301	7261
20°	7547	7143	7089
25°	7429	6965	6898
30°	7302	6789	6703
35°	7158	6609	6532
40°	7042	6436	6353
45°	6871	6278	6200
50°	6727	6095	6039
55°	6577	5924	5849
60°	6344	5704	5676
65°	6089	5468	5463
70°	5778	5200	5215
75°	5348	4904	4991
80°	4865	4620	4771
85°	4264	4369	4644



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.8	1.2
10°-20°	260.3	3.5
20°-30°	393.5	5.2
30°-40°	476.1	6.3
40°-50°	503.4	6.7
50°-60°	473.7	6.3
60°-70°	393.1	5.2
70°-80°	276.1	3.7
80°-90°	160.0	2.1
90°-100°	139.5	1.9
100°-110°	366.9	4.9
110°-120°	616.7	8.2
120°-130°	750.4	10.0
130°-140°	786.3	10.5
140°-150°	727.1	9.7
150°-160°	584.5	7.8
160°-170°	377.0	5.0
170°-180°	129.9	1.7
0°-30°	744.6	9.9
0°-40°	1220.8	16.3
0°-60°	2197.9	29.3
0°-90°	3027.0	40.3
90°-120°	1123.1	15.0
90°-150°	3386.9	45.1
90°-180°	4478.0	59.7
0°-180°	7505.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	959	959	959	959	959	
5°	960	957	950	958	957	91
15°	921	921	918	928	927	259
25°	842	848	852	863	865	388
35°	737	750	760	775	779	461
45°	614	635	655	673	679	475
55°	481	504	536	557	564	429
65°	333	368	404	430	439	330
75°	185	225	270	299	309	196
85°	57	102	150	181	193	61
90°	20	74	129	165	177	14
95°	70	73	116	150	162	83
105°	318	346	390	423	398	333
115°	582	595	628	652	661	572
125°	813	817	840	863	871	725
135°	1005	1004	1015	1034	1043	774
145°	1157	1159	1159	1167	1173	723
155°	1268	1268	1266	1269	1267	584
165°	1337	1332	1332	1339	1331	378
175°	1368	1362	1363	1371	1360	130
180°	1368	1368	1368	1368	1368	



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CATALOG NUMBER: S124DIW-S795D1050U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3
2.5°	962.7	962.1	961.5	961.0	960.4	959.4	957.8	956.2	954.7	953.2	954.5
5°	960.3	959.6	958.9	958.2	957.5	956.2	954.5	952.9	951.2	949.6	951.5
7.5°	952.1	951.7	951.3	950.9	950.4	949.5	948.2	946.7	945.3	944.0	946.1
10°	945.2	945.0	944.8	944.5	944.3	943.6	942.4	941.2	940.0	938.8	941.0
12.5°	935.8	935.7	935.7	935.6	935.6	935.2	934.4	933.5	932.7	931.9	933.9
15°	920.6	920.8	921.0	921.3	921.5	921.3	920.6	919.9	919.1	918.4	920.6
17.5°	899.7	900.4	901.1	901.9	902.6	902.8	902.7	902.6	902.4	902.3	904.5
20°	885.1	885.9	886.6	887.3	888.0	888.5	888.7	888.9	889.2	889.4	891.8
22.5°	868.8	869.7	870.6	871.5	872.4	873.1	873.5	873.9	874.3	874.8	877.2
25°	842.1	843.5	845.1	846.5	847.9	849.0	849.7	850.4	851.1	851.8	854.4
27.5°	812.5	814.6	816.7	818.8	820.9	822.5	823.6	824.7	825.8	826.9	829.3
30°	792.7	794.7	796.6	798.5	800.4	802.1	803.9	805.5	807.2	808.8	811.4
32.5°	771.2	773.6	775.9	778.1	780.4	782.4	784.4	786.2	788.1	789.9	792.9
35°	736.9	739.7	742.7	745.5	748.3	750.9	753.4	755.8	758.1	760.5	763.9
37.5°	702.3	705.6	708.9	712.2	715.5	718.6	721.5	724.5	727.5	730.4	733.9
40°	679.9	683.1	686.1	689.2	692.4	695.6	698.9	702.3	705.6	708.9	712.6
42.5°	654.2	657.6	661.2	664.6	668.1	671.8	675.7	679.6	683.6	687.4	691.5
45°	614.4	618.9	623.5	628.0	632.6	637.1	641.7	646.2	650.7	655.2	659.3
47.5°	576.4	581.1	585.7	590.5	595.1	600.1	605.3	610.6	615.8	621.1	625.3
50°	548.9	554.1	559.4	564.6	569.9	575.1	580.4	585.6	590.9	596.1	601.0
52.5°	521.4	526.6	531.9	537.1	542.4	548.1	554.0	560.1	566.1	572.1	576.8
55°	481.2	486.3	491.3	496.2	501.3	507.4	514.5	521.7	528.9	536.0	540.8
57.5°	436.4	442.5	448.8	454.9	461.1	467.8	474.9	482.0	489.2	496.2	501.9
60°	407.1	413.3	419.5	425.8	431.9	439.0	446.9	454.7	462.6	470.5	475.9
62.5°	378.7	385.6	392.3	399.1	405.9	413.2	421.1	429.0	436.9	444.7	450.2
65°	333.0	340.6	348.3	355.9	363.6	371.4	379.5	387.7	395.8	403.8	409.8
67.5°	288.9	297.1	305.2	313.3	321.4	329.8	338.5	347.2	355.9	364.6	370.6
70°	258.8	267.0	275.1	283.3	291.3	299.9	309.0	318.1	327.1	336.2	342.6
72.5°	229.6	237.9	246.3	254.6	262.9	271.9	281.6	291.1	300.8	310.4	316.7
75°	184.8	193.6	202.4	211.3	220.0	229.5	239.5	249.5	259.6	269.6	276.3
77.5°	142.9	152.2	161.6	171.0	180.3	190.3	200.8	211.3	221.8	232.3	239.0
80°	117.0	126.6	136.1	145.7	155.3	165.3	175.8	186.3	196.8	207.3	214.5
82.5°	91.3	101.2	111.2	121.1	131.0	141.3	151.8	162.3	172.8	183.3	190.6
85°	57.0	67.0	77.0	87.1	97.0	107.4	118.2	128.9	139.7	150.4	157.5
87.5°	32.4	42.6	52.9	63.1	73.3	83.9	94.7	105.5	116.3	127.1	134.4
90°	20.3	32.3	44.3	56.5	68.5	80.5	92.6	104.7	116.7	128.9	137.1
92.5°	29.2	38.0	46.7	55.4	64.1	74.5	86.6	98.7	110.8	122.9	131.0
95°	70.3	70.4	70.5	70.7	70.8	75.9	85.9	95.9	105.9	115.9	123.8
97.5°	132.2	143.8	155.4	166.9	178.5	176.5	160.9	145.2	129.5	113.8	120.2
100°	179.7	190.0	200.3	210.6	220.9	214.9	192.9	170.8	148.8	126.6	129.3
102.5°	233.7	242.1	250.5	258.9	267.4	274.2	279.1	284.2	289.2	294.3	258.8
105°	317.6	323.8	329.9	336.1	342.2	350.2	360.2	370.2	380.1	390.1	398.1
107.5°	397.5	402.0	406.7	411.2	415.9	423.0	432.9	442.9	452.8	462.7	469.6
110°	450.6	454.6	458.7	462.7	466.7	473.5	483.3	493.0	502.7	512.4	518.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	502.1	506.3	510.5	514.7	518.9	525.2	533.9	542.5	551.1	559.7	564.9
115°	581.5	584.3	587.1	590.0	592.8	597.9	605.3	612.7	620.2	627.5	633.3
117.5°	653.9	656.1	658.3	660.5	662.7	667.6	675.2	682.9	690.4	698.0	703.0
120°	702.2	703.8	705.4	707.0	708.6	712.9	719.5	726.2	732.9	739.6	744.8
122.5°	748.0	748.7	749.3	750.0	750.7	754.5	761.3	768.2	775.1	781.9	787.0
125°	812.6	813.2	814.0	814.7	815.3	818.4	823.8	829.4	835.0	840.4	845.7
127.5°	874.6	874.5	874.5	874.5	874.5	877.4	883.0	888.6	894.2	899.9	904.0
130°	913.8	913.8	913.8	913.8	913.8	916.0	920.6	925.0	929.6	934.0	938.6
132.5°	950.7	950.9	951.0	951.2	951.4	953.4	957.4	961.3	965.1	969.1	973.4
135°	1004.8	1004.6	1004.4	1004.2	1003.9	1005.1	1007.7	1010.3	1012.9	1015.4	1019.8
137.5°	1053.8	1053.6	1053.5	1053.3	1053.2	1054.0	1055.8	1057.6	1059.4	1061.3	1065.2
140°	1085.7	1085.9	1086.1	1086.3	1086.5	1087.0	1087.7	1088.4	1089.0	1089.7	1093.6
142.5°	1113.5	1114.3	1115.0	1115.8	1116.6	1117.0	1117.1	1117.3	1117.4	1117.5	1120.7
145°	1157.3	1157.7	1158.1	1158.6	1159.0	1159.2	1159.2	1159.2	1159.2	1159.2	1160.9
147.5°	1192.2	1193.3	1194.4	1195.4	1196.4	1196.8	1196.6	1196.4	1196.1	1195.9	1196.3
150°	1217.6	1218.3	1219.0	1219.6	1220.3	1220.5	1220.3	1220.1	1219.8	1219.6	1219.6
152.5°	1238.1	1238.7	1239.4	1240.1	1240.7	1240.9	1240.5	1240.1	1239.7	1239.3	1239.6
155°	1267.7	1268.0	1268.2	1268.4	1268.6	1268.4	1267.7	1267.1	1266.4	1265.7	1266.6
157.5°	1292.9	1292.7	1292.6	1292.4	1292.3	1291.9	1291.1	1290.3	1289.6	1288.8	1290.0
160°	1307.6	1307.0	1306.3	1305.6	1304.8	1304.4	1304.2	1303.9	1303.7	1303.5	1304.8
162.5°	1320.7	1319.9	1319.0	1318.1	1317.3	1316.7	1316.5	1316.3	1316.1	1315.8	1317.2
165°	1337.3	1336.2	1335.0	1333.8	1332.7	1332.2	1332.2	1332.2	1332.2	1332.2	1334.0
167.5°	1350.4	1349.2	1348.1	1346.9	1345.6	1345.0	1344.8	1344.7	1344.6	1344.4	1346.5
170°	1357.8	1356.3	1355.0	1353.6	1352.3	1351.7	1351.9	1352.2	1352.4	1352.6	1354.4
172.5°	1362.6	1361.3	1359.9	1358.6	1357.2	1356.7	1356.9	1357.1	1357.4	1357.6	1359.4
175°	1368.0	1366.7	1365.2	1363.9	1362.5	1362.0	1362.2	1362.4	1362.6	1362.9	1364.9
177.5°	1370.4	1369.2	1367.9	1366.7	1365.3	1364.9	1365.2	1365.6	1365.9	1366.3	1367.8
180°	1368.0	1368.0	1368.0	1368.0	1368.0	1368.0	1368.0	1368.0	1368.0	1368.0	1368.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3
2.5°	955.8	957.3	958.6	959.2	959.0	958.8	958.6	958.4
5°	953.4	955.3	957.2	958.1	957.8	957.6	957.4	957.0
7.5°	948.3	950.4	952.6	953.5	953.3	953.0	952.8	952.6
10°	943.1	945.2	947.5	948.4	948.2	947.9	947.7	947.5
12.5°	935.8	937.9	939.8	940.7	940.7	940.6	940.6	940.5
15°	922.7	924.8	927.0	928.0	927.8	927.5	927.3	927.0
17.5°	906.7	908.9	911.1	912.1	911.9	911.7	911.5	911.3
20°	894.1	896.6	899.0	900.2	900.2	900.2	900.2	900.2
22.5°	879.6	881.9	884.3	885.8	886.2	886.5	886.9	887.3
25°	857.1	859.7	862.3	863.7	863.9	864.2	864.4	864.7
27.5°	831.7	834.1	836.7	838.0	838.3	838.6	838.9	839.1
30°	814.1	816.7	819.3	820.9	821.4	821.8	822.3	822.8
32.5°	796.0	799.0	801.9	803.8	804.2	804.7	805.2	805.7
35°	767.2	770.5	773.9	775.9	776.6	777.3	778.1	778.8
37.5°	737.2	740.6	744.0	746.1	746.8	747.6	748.3	749.1
40°	716.1	719.7	723.3	725.5	726.5	727.4	728.4	729.3
42.5°	695.4	699.3	703.3	705.7	706.4	707.2	708.0	708.7
45°	663.4	667.4	671.5	674.1	675.3	676.5	677.7	678.8
47.5°	629.4	633.7	637.9	640.7	642.2	643.6	645.0	646.4
50°	605.7	610.5	615.2	618.3	619.8	621.3	622.7	624.1
52.5°	581.7	586.4	591.2	594.3	595.7	597.1	598.5	600.1
55°	545.5	550.4	555.1	558.3	559.7	561.1	562.5	563.9
57.5°	507.7	513.3	519.0	522.5	523.8	525.1	526.5	527.9
60°	481.5	487.0	492.4	496.1	498.1	500.0	501.9	503.8
62.5°	455.7	461.2	466.7	470.4	472.3	474.2	476.1	478.0
65°	415.9	421.8	427.8	431.7	433.6	435.6	437.4	439.3
67.5°	376.7	382.7	388.8	392.7	394.7	396.5	398.4	400.2
70°	349.1	355.6	362.0	366.1	367.7	369.4	371.0	372.7
72.5°	323.0	329.2	335.5	339.5	341.3	343.3	345.1	347.0
75°	283.0	289.6	296.4	300.7	303.0	305.1	307.2	309.3
77.5°	245.8	252.6	259.3	263.9	266.2	268.4	270.7	273.1
80°	221.7	228.8	236.0	240.4	242.4	244.3	246.2	248.1
82.5°	197.9	205.3	212.7	217.4	219.4	221.6	223.7	225.8
85°	164.7	171.9	179.0	183.8	186.2	188.5	191.0	193.4
87.5°	141.6	148.8	155.9	160.7	162.8	165.0	167.2	169.5
90°	145.4	153.7	162.0	167.3	169.7	172.1	174.4	176.8
92.5°	139.1	147.1	155.2	160.3	162.3	164.3	166.3	168.3
95°	131.6	139.4	147.2	152.3	154.7	157.0	159.5	161.8
97.5°	126.5	133.0	139.4	143.7	146.0	148.2	150.6	152.8
100°	131.8	134.4	136.9	139.3	141.1	143.0	144.9	146.8
102.5°	223.4	187.9	152.5	135.7	137.6	139.6	141.4	143.3
105°	406.2	414.1	422.2	423.0	416.8	410.5	404.2	398.0
107.5°	476.5	483.3	490.2	494.9	497.5	500.1	502.6	505.2
110°	524.3	530.3	536.2	540.5	543.1	545.6	548.3	550.9



TEST NUMBER: P332789-840

CATALOG NUMBER: S124DIW-S795D1050U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	570.2	575.3	580.6	584.5	587.3	590.1	592.9	595.6
115°	638.9	644.7	650.4	654.1	655.7	657.4	659.0	660.8
117.5°	707.8	712.7	717.5	720.9	722.8	724.6	726.4	728.2
120°	750.0	755.3	760.5	763.9	765.3	766.8	768.2	769.7
122.5°	792.0	797.1	802.1	805.3	806.6	807.8	809.1	810.3
125°	850.9	856.1	861.3	864.7	866.4	868.1	869.7	871.4
127.5°	908.2	912.3	916.6	919.3	920.8	922.2	923.6	925.0
130°	943.1	947.7	952.1	955.1	956.5	958.0	959.4	960.9
132.5°	977.8	982.1	986.4	989.2	990.5	991.7	993.0	994.2
135°	1024.0	1028.2	1032.6	1035.6	1037.5	1039.4	1041.3	1043.2
137.5°	1069.2	1073.2	1077.2	1079.7	1080.8	1081.9	1082.9	1084.0
140°	1097.3	1101.2	1104.9	1107.5	1108.9	1110.3	1111.8	1113.2
142.5°	1124.0	1127.2	1130.4	1132.6	1133.6	1134.7	1135.7	1136.7
145°	1162.6	1164.3	1165.9	1167.4	1168.8	1170.2	1171.6	1173.1
147.5°	1196.6	1197.0	1197.4	1198.1	1199.0	1200.0	1201.0	1202.0
150°	1219.6	1219.6	1219.6	1219.7	1219.9	1220.2	1220.4	1220.6
152.5°	1240.0	1240.3	1240.7	1240.8	1240.7	1240.5	1240.4	1240.3
155°	1267.5	1268.4	1269.3	1269.4	1268.7	1268.1	1267.4	1266.7
157.5°	1291.1	1292.3	1293.5	1293.5	1292.3	1291.1	1290.0	1288.8
160°	1306.3	1307.6	1309.0	1309.0	1307.6	1306.3	1304.8	1303.5
162.5°	1318.5	1319.9	1321.2	1321.2	1319.6	1318.1	1316.6	1314.9
165°	1335.8	1337.7	1339.5	1339.3	1337.3	1335.2	1333.2	1331.1
167.5°	1348.5	1350.5	1352.4	1352.3	1350.1	1347.8	1345.5	1343.2
170°	1356.2	1358.1	1359.9	1359.7	1357.4	1355.1	1352.8	1350.6
172.5°	1361.2	1363.0	1364.8	1364.5	1362.0	1359.6	1357.2	1354.6
175°	1367.0	1369.0	1371.1	1370.7	1368.0	1365.2	1362.5	1359.8
177.5°	1369.3	1370.7	1372.2	1371.8	1369.6	1367.5	1365.2	1363.1
180°	1368.0	1368.0	1368.0	1368.0	1368.0	1368.0	1368.0	1368.0

(END OF REPORT)