

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: P331989-940

Luminaire Tested: **S123DIP-S775D1025U940-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331989-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S775D1025U940-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1025 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5968.4 lumens
Efficiency: N/A
Efficacy: 114.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

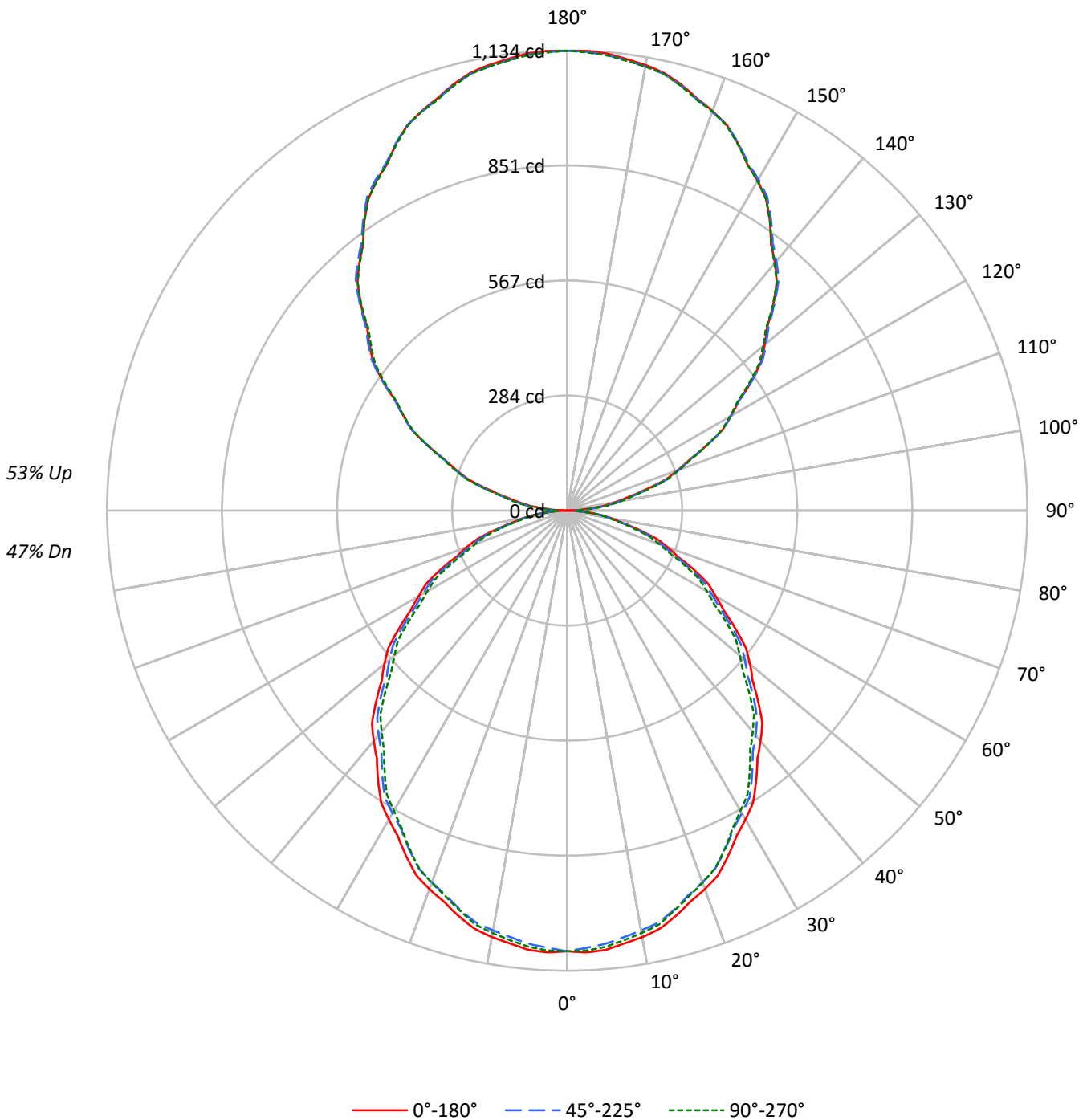
Input Watts (W): 52
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	107	107	107	107	98	98	98	98	82	82	82	67	67	67	54	54	54	47				47
1	97	93	89	85	89	85	82	79	72	69	67	59	57	56	47	46	45				40	
2	88	81	75	70	81	75	69	65	63	59	55	52	49	47	42	40	38				33	
3	81	71	64	58	74	66	59	54	55	51	47	46	42	39	37	34	32				28	
4	74	63	55	49	67	58	51	46	49	44	40	41	37	34	33	30	28				24	
5	68	56	48	42	62	52	45	39	44	38	34	37	32	29	30	27	24				21	
6	62	50	42	36	57	47	39	34	40	34	30	33	29	26	27	24	21				18	
7	58	45	37	32	53	42	35	30	36	30	26	30	26	23	25	21	19				16	
8	53	41	33	28	49	38	31	26	33	27	23	27	23	20	23	19	17				15	
9	50	38	30	25	46	35	28	24	30	25	21	25	21	18	21	18	15				13	
10	46	34	27	22	43	32	26	21	28	22	19	23	19	16	19	16	14				12	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11689	11689	11689
5°	11743	11581	11662
10°	11664	11481	11552
15°	11529	11352	11373
20°	11369	11165	11176
25°	11156	10946	10923
30°	10920	10700	10618
35°	10674	10441	10306
40°	10418	10153	9997
45°	10135	9893	9651
50°	9851	9568	9302
55°	9481	9233	8955
60°	9104	8844	8564
65°	8777	8420	8155
70°	8286	7934	7582
75°	7573	7303	6991
80°	6831	6540	6484
85°	5990	5768	5545



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.3	1.7
10°-20°	288.8	4.8
20°-30°	426.6	7.1
30°-40°	498.4	8.4
40°-50°	501.0	8.4
50°-60°	440.1	7.4
60°-70°	327.9	5.5
70°-80°	186.8	3.1
80°-90°	57.0	1.0
90°-100°	73.8	1.2
100°-110°	220.9	3.7
110°-120°	375.8	6.3
120°-130°	494.3	8.3
130°-140°	555.6	9.3
140°-150°	546.1	9.1
150°-160°	459.7	7.7
160°-170°	306.0	5.1
170°-180°	107.2	1.8
0°-30°	817.7	13.7
0°-40°	1316.1	22.1
0°-60°	2257.3	37.8
0°-90°	2828.9	47.4
90°-120°	670.6	11.2
90°-150°	2266.5	38.0
90°-180°	3139.0	52.6
0°-180°	5968.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1086	1086	1086	1086	1086	
5°	1087	1082	1072	1081	1079	103
15°	1035	1030	1019	1025	1021	292
25°	939	933	922	922	920	432
35°	812	806	795	789	784	508
45°	666	662	650	639	634	514
55°	505	504	492	482	477	452
65°	345	340	331	323	320	340
75°	182	178	176	171	168	195
85°	48	47	47	45	45	53
90°	1	10	21	25	27	6
95°	52	59	66	69	70	59
105°	200	202	210	210	212	214
115°	378	381	379	380	379	374
125°	554	556	555	551	547	494
135°	718	723	723	719	718	553
145°	871	873	876	875	871	544
155°	998	998	999	1002	996	459
165°	1087	1084	1084	1089	1083	306
175°	1130	1127	1127	1132	1126	107
180°	1133	1133	1133	1133	1133	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9
2.5°	1089.6	1089.0	1088.3	1087.6	1087.0	1085.7	1083.9	1082.1	1080.2	1078.4	1080.0
5°	1086.8	1085.7	1084.8	1083.7	1082.6	1081.0	1078.7	1076.5	1074.2	1071.8	1074.0
7.5°	1076.2	1075.1	1074.1	1073.1	1072.0	1070.3	1067.9	1065.6	1063.2	1060.9	1062.7
10°	1067.2	1066.1	1065.1	1064.1	1063.1	1061.2	1058.5	1055.8	1053.1	1050.4	1052.3
12.5°	1055.3	1054.4	1053.6	1052.7	1051.8	1050.1	1047.6	1045.0	1042.5	1039.9	1041.3
15°	1034.6	1033.7	1032.9	1032.1	1031.2	1029.5	1026.7	1024.0	1021.4	1018.7	1020.3
17.5°	1010.4	1009.3	1008.3	1007.2	1006.1	1004.2	1001.6	998.8	996.1	993.5	994.6
20°	992.5	991.2	990.1	988.8	987.6	985.5	982.8	980.2	977.5	974.7	975.6
22.5°	972.3	971.1	969.8	968.6	967.3	965.4	962.7	960.0	957.3	954.6	955.3
25°	939.3	938.1	936.8	935.6	934.3	932.4	929.6	926.9	924.3	921.6	921.8
27.5°	904.0	902.8	901.6	900.4	899.2	897.2	894.2	891.4	888.4	885.5	885.6
30°	878.6	877.5	876.6	875.5	874.4	872.4	869.6	866.7	863.8	860.9	860.9
32.5°	853.2	851.9	850.4	849.1	847.7	846.0	843.6	841.4	839.2	837.0	835.8
35°	812.3	811.1	809.9	808.6	807.4	805.4	802.6	800.0	797.3	794.6	793.4
37.5°	770.4	768.9	767.3	765.7	764.2	762.1	759.3	756.5	753.8	751.1	749.6
40°	741.4	740.1	738.9	737.6	736.4	734.3	731.4	728.5	725.6	722.6	721.0
42.5°	712.2	710.8	709.4	708.0	706.6	704.5	701.5	698.6	695.7	692.8	691.2
45°	665.8	664.9	664.1	663.3	662.4	660.7	657.9	655.2	652.6	649.9	647.4
47.5°	619.6	618.4	617.2	616.0	614.7	612.9	610.4	607.9	605.3	602.8	600.3
50°	588.3	587.2	586.1	585.1	584.1	582.2	579.5	576.8	574.1	571.4	569.2
52.5°	555.4	554.6	553.9	553.2	552.5	550.7	547.9	545.0	542.2	539.3	537.3
55°	505.2	504.9	504.7	504.5	504.3	502.8	500.2	497.5	494.7	492.0	489.8
57.5°	457.4	456.6	455.9	455.2	454.5	453.1	450.9	448.7	446.6	444.4	442.4
60°	422.9	422.8	422.6	422.3	422.1	420.8	418.3	415.8	413.3	410.8	408.9
62.5°	392.4	391.8	391.3	390.7	390.2	388.7	386.2	383.7	381.2	378.7	376.8
65°	344.6	343.5	342.4	341.4	340.4	338.9	336.7	334.7	332.6	330.6	328.9
67.5°	293.9	293.0	292.1	291.1	290.3	289.0	287.5	285.9	284.3	282.8	281.2
70°	263.3	262.1	260.8	259.6	258.3	257.1	255.8	254.6	253.3	252.1	250.7
72.5°	231.2	230.2	229.3	228.5	227.6	226.4	225.0	223.6	222.1	220.7	219.5
75°	182.1	181.2	180.4	179.6	178.8	178.0	177.4	176.7	176.1	175.6	174.5
77.5°	138.6	138.1	137.7	137.2	136.7	136.2	135.4	134.6	133.9	133.1	132.4
80°	110.2	109.6	109.0	108.3	107.7	107.2	106.7	106.4	105.9	105.5	105.3
82.5°	82.6	82.4	82.3	82.1	82.0	81.9	81.9	81.8	81.7	81.6	81.2
85°	48.5	48.2	47.7	47.3	46.9	46.7	46.7	46.7	46.7	46.7	46.3
87.5°	19.6	19.5	19.4	19.3	19.2	19.4	19.6	20.0	20.3	20.7	20.7
90°	0.9	2.9	4.8	6.9	8.8	11.1	13.6	16.2	18.8	21.4	22.1
92.5°	21.6	22.9	24.3	25.6	26.9	28.4	29.8	31.2	32.7	34.2	34.8
95°	52.5	53.9	55.3	56.7	58.1	59.6	61.1	62.7	64.3	65.9	66.7
97.5°	93.3	94.3	95.3	96.4	97.4	98.4	99.6	100.8	101.9	103.1	104.0
100°	121.1	122.3	123.4	124.6	125.8	126.9	127.9	128.9	129.8	130.8	131.4
102.5°	153.1	153.8	154.5	155.2	156.0	156.9	158.3	159.5	160.9	162.2	162.7
105°	200.3	200.6	201.1	201.4	201.9	203.0	204.7	206.5	208.3	210.1	210.1
107.5°	255.1	255.4	255.6	255.8	256.1	256.5	257.3	258.0	258.7	259.4	260.0
110°	289.3	289.7	290.1	290.4	290.9	291.2	291.7	292.0	292.5	292.8	293.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	324.9	325.1	325.4	325.6	325.8	326.0	326.1	326.2	326.3	326.3	327.3
115°	378.3	378.9	379.5	380.0	380.7	380.8	380.4	380.0	379.6	379.2	379.4
117.5°	432.0	432.5	432.8	433.3	433.6	433.5	433.1	432.6	432.0	431.5	431.5
120°	465.6	466.7	467.9	469.1	470.3	470.4	469.4	468.4	467.4	466.5	466.2
122.5°	500.4	501.3	502.1	503.0	503.9	504.1	503.5	503.0	502.6	502.0	501.5
125°	553.7	554.3	554.8	555.4	556.0	556.2	555.7	555.4	554.9	554.6	553.8
127.5°	602.8	604.0	605.3	606.5	607.9	608.2	607.8	607.4	607.0	606.5	605.4
130°	635.5	637.1	638.7	640.2	641.9	642.4	641.8	641.1	640.6	640.0	639.2
132.5°	668.3	669.9	671.5	673.1	674.7	675.2	674.8	674.3	673.9	673.4	672.5
135°	718.4	719.5	720.7	721.8	723.1	723.5	723.4	723.2	723.0	722.7	722.0
137.5°	764.6	765.6	766.6	767.6	768.6	769.3	769.8	770.3	770.9	771.3	770.5
140°	796.7	797.6	798.6	799.6	800.6	801.2	801.4	801.6	801.8	802.0	801.8
142.5°	825.8	826.8	827.9	828.8	829.8	830.5	830.8	831.2	831.5	831.9	831.7
145°	871.4	871.8	872.2	872.6	873.0	873.5	874.1	874.7	875.3	875.8	875.7
147.5°	911.3	912.0	912.8	913.5	914.2	914.8	915.3	915.9	916.4	917.0	917.0
150°	939.1	939.5	939.9	940.2	940.7	941.0	941.5	941.8	942.3	942.6	942.6
152.5°	961.9	962.4	963.0	963.5	964.0	964.5	964.7	964.9	965.2	965.5	965.7
155°	997.8	997.8	997.8	997.8	997.8	997.9	998.1	998.3	998.5	998.7	999.5
157.5°	1028.4	1028.2	1028.0	1027.7	1027.5	1027.4	1027.6	1027.8	1028.0	1028.1	1028.9
160°	1047.7	1047.2	1046.9	1046.5	1046.1	1045.9	1045.9	1045.9	1045.9	1045.9	1046.9
162.5°	1064.8	1064.2	1063.6	1063.1	1062.6	1062.4	1062.5	1062.7	1062.8	1063.0	1064.0
165°	1086.8	1086.2	1085.7	1085.0	1084.5	1084.1	1084.1	1084.1	1084.1	1084.1	1085.3
167.5°	1104.5	1103.7	1102.9	1102.1	1101.3	1101.0	1101.2	1101.3	1101.4	1101.6	1102.9
170°	1114.5	1113.7	1112.9	1112.1	1111.3	1110.9	1110.9	1110.9	1110.9	1110.9	1112.2
172.5°	1122.2	1121.5	1120.7	1119.9	1119.1	1118.7	1118.7	1118.7	1118.7	1118.7	1119.9
175°	1130.4	1129.6	1128.8	1128.1	1127.3	1126.9	1126.9	1126.9	1126.9	1126.9	1128.1
177.5°	1133.8	1133.2	1132.6	1131.9	1131.3	1131.0	1131.0	1131.0	1131.0	1131.0	1131.9
180°	1133.1	1133.1	1133.1	1133.1	1133.1	1133.1	1133.1	1133.1	1133.1	1133.1	1133.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9
2.5°	1081.7	1083.4	1085.0	1085.8	1085.7	1085.5	1085.3	1085.1
5°	1076.0	1078.1	1080.2	1081.0	1080.6	1080.2	1079.8	1079.3
7.5°	1064.6	1066.5	1068.4	1069.2	1068.9	1068.6	1068.4	1068.2
10°	1054.2	1056.0	1057.8	1058.6	1058.2	1057.7	1057.4	1056.9
12.5°	1042.7	1044.0	1045.4	1046.0	1045.7	1045.4	1045.3	1045.0
15°	1022.0	1023.6	1025.3	1025.5	1024.2	1023.0	1021.8	1020.6
17.5°	995.8	996.9	998.1	998.4	998.0	997.6	997.1	996.7
20°	976.4	977.2	978.1	978.2	977.6	977.0	976.3	975.7
22.5°	955.9	956.6	957.3	957.2	956.4	955.6	954.8	954.0
25°	921.9	922.2	922.4	922.2	921.6	921.0	920.3	919.7
27.5°	885.8	886.0	886.2	885.8	885.1	884.3	883.5	882.7
30°	860.9	860.9	860.9	860.1	858.7	857.2	855.8	854.3
32.5°	834.6	833.5	832.3	831.3	830.5	829.7	828.9	828.2
35°	792.1	790.9	789.6	788.5	787.4	786.4	785.3	784.3
37.5°	748.1	746.5	745.1	744.0	743.3	742.7	742.0	741.4
40°	719.3	717.7	716.0	714.8	714.0	713.1	712.3	711.5
42.5°	689.5	687.8	686.2	684.9	684.1	683.2	682.4	681.6
45°	644.9	642.4	639.9	638.1	637.1	636.1	635.0	634.0
47.5°	597.9	595.5	593.0	591.3	590.4	589.5	588.6	587.6
50°	566.9	564.5	562.3	560.5	559.3	558.0	556.8	555.5
52.5°	535.4	533.4	531.5	529.9	528.7	527.4	526.2	525.0
55°	487.5	485.2	483.0	481.3	480.2	479.2	478.1	477.2
57.5°	440.3	438.4	436.3	434.7	433.5	432.3	431.1	429.9
60°	407.1	405.2	403.3	401.9	400.8	399.8	398.8	397.8
62.5°	375.0	373.1	371.2	370.0	369.3	368.5	367.8	367.1
65°	327.2	325.6	323.9	322.7	322.1	321.5	320.8	320.2
67.5°	279.8	278.4	276.9	275.7	274.9	274.0	273.1	272.2
70°	249.2	247.7	246.3	245.0	244.0	243.0	241.9	240.9
72.5°	218.1	216.9	215.6	214.6	214.1	213.6	213.0	212.5
75°	173.4	172.5	171.4	170.6	170.0	169.3	168.7	168.1
77.5°	131.7	131.0	130.3	130.0	130.0	130.0	130.0	130.0
80°	105.1	104.9	104.7	104.6	104.6	104.6	104.6	104.6
82.5°	80.9	80.5	80.1	79.8	79.7	79.5	79.4	79.2
85°	45.8	45.5	45.0	44.9	44.9	44.9	44.9	44.9
87.5°	20.7	20.7	20.7	20.7	20.8	20.9	21.0	21.0
90°	22.9	23.7	24.5	25.1	25.5	25.9	26.3	26.7
92.5°	35.5	36.1	36.7	36.9	36.6	36.5	36.2	35.9
95°	67.4	68.2	69.0	69.5	69.5	69.5	69.5	69.5
97.5°	104.9	105.8	106.7	107.1	107.1	107.0	106.9	106.8
100°	132.1	132.6	133.2	133.8	134.1	134.5	134.9	135.3
102.5°	163.4	164.0	164.5	164.8	164.7	164.6	164.6	164.5
105°	210.1	210.1	210.1	210.3	210.6	211.1	211.4	211.9
107.5°	260.6	261.3	261.9	262.1	261.9	261.6	261.4	261.2
110°	294.4	295.2	296.0	296.2	295.8	295.4	295.1	294.6



TEST NUMBER: P331989-940

CATALOG NUMBER: S123DIP-S775D1025U940-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	328.2	329.1	330.1	330.6	330.5	330.4	330.3	330.2
115°	379.6	379.8	380.0	380.0	379.8	379.6	379.4	379.2
117.5°	431.4	431.4	431.4	431.1	430.5	430.0	429.4	428.8
120°	466.0	465.8	465.7	465.3	464.9	464.6	464.1	463.8
122.5°	501.0	500.5	500.0	499.4	498.9	498.3	497.8	497.2
125°	552.9	552.1	551.3	550.5	549.8	549.0	548.2	547.4
127.5°	604.3	603.2	602.1	601.1	600.2	599.2	598.3	597.4
130°	638.4	637.6	636.9	635.7	634.4	632.9	631.6	630.2
132.5°	671.5	670.7	669.7	668.7	667.6	666.6	665.5	664.4
135°	721.2	720.4	719.6	719.0	718.6	718.2	717.8	717.5
137.5°	769.7	768.9	768.0	767.2	766.5	765.7	765.0	764.3
140°	801.6	801.4	801.2	800.4	799.1	797.6	796.3	794.9
142.5°	831.5	831.3	831.1	830.5	829.4	828.3	827.2	826.2
145°	875.5	875.3	875.0	874.6	873.8	873.0	872.2	871.4
147.5°	917.0	917.0	917.0	916.4	915.3	914.0	912.8	911.7
150°	942.6	942.6	942.6	942.0	940.8	939.7	938.4	937.3
152.5°	966.1	966.3	966.7	966.3	965.3	964.3	963.2	962.2
155°	1000.3	1001.1	1001.8	1001.6	1000.2	998.8	997.4	996.0
157.5°	1029.7	1030.6	1031.4	1031.3	1030.2	1029.0	1028.0	1026.8
160°	1047.8	1048.8	1049.8	1049.9	1049.2	1048.4	1047.6	1046.8
162.5°	1065.0	1066.0	1066.9	1066.8	1065.5	1064.3	1063.0	1061.8
165°	1086.5	1087.7	1088.9	1088.8	1087.4	1086.0	1084.7	1083.3
167.5°	1104.0	1105.3	1106.5	1106.5	1105.3	1104.0	1102.9	1101.6
170°	1113.7	1115.0	1116.4	1116.4	1115.0	1113.7	1112.2	1110.9
172.5°	1121.1	1122.4	1123.6	1123.6	1122.1	1120.8	1119.4	1117.9
175°	1129.3	1130.4	1131.7	1131.5	1130.2	1128.7	1127.4	1126.0
177.5°	1132.9	1133.8	1134.8	1134.7	1133.6	1132.5	1131.4	1130.2
180°	1133.1	1133.1	1133.1	1133.1	1133.1	1133.1	1133.1	1133.1

(END OF REPORT)