

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: P331976-840

Luminaire Tested: **S123DIP-S775D805U840-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331976-840
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: S123DIP-S775D805U840-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 805 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6505.6 lumens
Efficiency: N/A
Efficacy: 141.7 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: General Diffuse

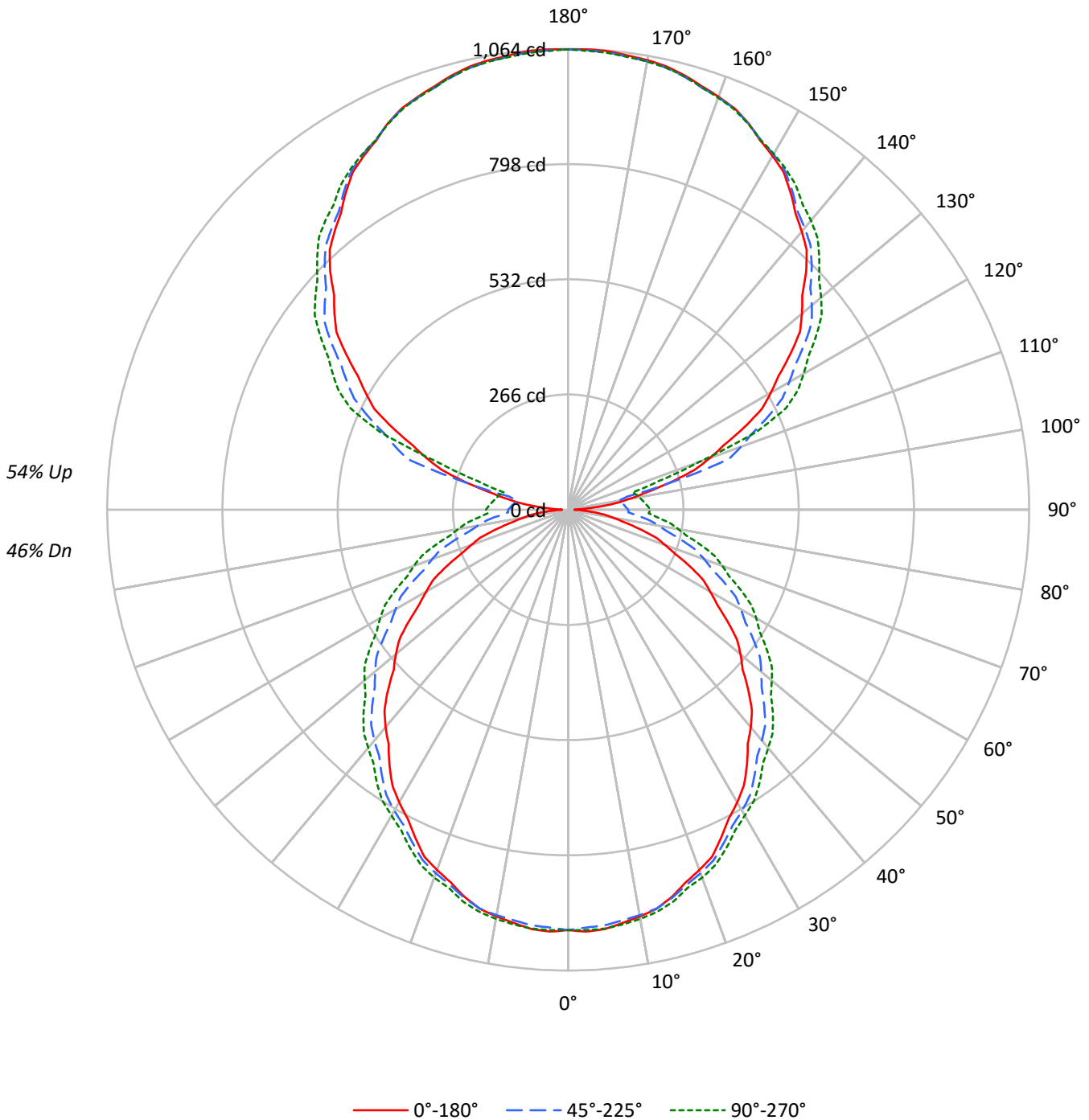
Input Watts (W): 45.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P331976-840

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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	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	50	30	10	0														
RCR																																						
0	106	106	106	106	97	97	97	97	81	81	81	66	66	66	52	52	52	46																				
1	96	91	87	83	88	84	80	77	70	67	65	57	55	53	45	44	42	37																				
2	87	79	73	67	79	73	67	62	60	56	53	49	46	44	39	37	35	30																				
3	79	69	62	55	72	64	57	51	53	48	44	43	40	36	34	32	29	25																				
4	72	61	53	47	66	56	49	43	47	41	37	38	34	31	30	27	25	21																				
5	66	54	46	40	60	50	43	37	42	36	32	34	30	27	27	24	22	18																				
6	61	48	40	34	55	45	37	32	38	32	28	31	27	23	25	21	19	16																				
7	56	44	36	30	51	40	33	28	34	28	24	28	24	20	22	19	17	14																				
8	52	40	32	26	48	37	30	25	31	25	21	26	21	18	21	17	15	12																				
9	48	36	28	23	44	33	27	22	28	23	19	23	19	16	19	16	13	11																				
10	45	33	26	21	41	31	24	20	26	21	17	22	18	15	18	14	12	10																				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10449	10449	10449
5°	10481	10185	10191
10°	10387	9951	9901
15°	10253	9685	9584
20°	10061	9380	9236
25°	9826	9030	8869
30°	9583	8714	8498
35°	9312	8382	8201
40°	9054	8079	7884
45°	8767	7788	7630
50°	8484	7501	7350
55°	8172	7206	7099
60°	7867	6907	6840
65°	7553	6588	6534
70°	7082	6231	6219
75°	6487	5819	5899
80°	5804	5417	5533
85°	5167	5142	5320



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.0	1.4
10°-20°	262.3	4.0
20°-30°	392.3	6.0
30°-40°	468.5	7.2
40°-50°	490.2	7.5
50°-60°	460.0	7.1
60°-70°	384.2	5.9
70°-80°	274.9	4.2
80°-90°	166.9	2.6
90°-100°	141.5	2.2
100°-110°	259.7	4.0
110°-120°	492.8	7.6
120°-130°	592.1	9.1
130°-140°	614.7	9.4
140°-150°	565.5	8.7
150°-160°	453.9	7.0
160°-170°	293.0	4.5
170°-180°	101.0	1.6
0°-30°	746.7	11.5
0°-40°	1215.2	18.7
0°-60°	2165.4	33.3
0°-90°	2991.5	46.0
90°-120°	894.0	13.7
90°-150°	2666.3	41.0
90°-180°	3514.0	54.0
0°-180°	6505.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	971	971	971	971	971	
5°	972	969	963	971	971	92
15°	925	928	927	937	937	260
25°	835	846	849	862	863	385
35°	719	736	750	765	770	450
45°	588	613	640	659	668	453
55°	448	483	521	549	558	401
65°	310	351	398	428	440	306
75°	168	218	271	304	318	180
85°	52	105	161	195	207	54
90°	14	74	138	176	190	12
95°	60	72	129	166	178	69
105°	244	274	252	149	153	258
115°	447	466	509	541	554	441
125°	625	633	665	688	698	559
135°	777	781	795	816	819	598
145°	895	899	901	911	915	560
155°	984	983	984	987	983	453
165°	1038	1036	1035	1041	1036	293
175°	1063	1059	1060	1064	1059	101
180°	1063	1063	1063	1063	1063	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7
2.5°	974.9	974.3	973.8	973.2	972.7	971.6	970.2	968.7	967.1	965.6	967.1
5°	971.8	971.3	970.8	970.4	969.9	969.0	967.6	966.1	964.7	963.3	965.2
7.5°	962.2	962.3	962.4	962.5	962.6	962.0	960.6	959.3	957.9	956.5	958.9
10°	953.8	954.2	954.7	955.2	955.6	955.3	954.1	953.0	951.8	950.6	953.0
12.5°	943.6	944.3	944.9	945.6	946.2	946.2	945.4	944.6	943.8	943.0	945.1
15°	925.2	925.9	926.7	927.4	928.1	928.3	928.1	927.9	927.6	927.4	929.7
17.5°	902.0	903.4	904.8	906.2	907.6	908.3	908.2	908.1	908.0	907.9	910.0
20°	885.0	886.5	887.9	889.3	890.7	891.6	892.1	892.6	893.0	893.5	895.6
22.5°	867.3	868.7	870.1	871.5	872.9	873.9	874.6	875.3	876.0	876.6	879.3
25°	835.4	837.7	840.0	842.4	844.8	846.3	847.0	847.7	848.4	849.1	852.1
27.5°	803.2	805.9	808.6	811.2	814.0	816.0	817.5	819.0	820.5	822.0	824.7
30°	780.3	783.5	786.5	789.5	792.5	795.1	796.9	798.8	800.7	802.5	805.4
32.5°	755.0	758.4	761.8	765.3	768.7	771.6	774.1	776.6	779.0	781.4	784.5
35°	719.0	722.8	726.6	730.3	734.1	737.5	740.5	743.6	746.7	749.7	753.3
37.5°	681.0	685.2	689.4	693.7	697.9	701.9	705.7	709.4	713.2	716.9	720.9
40°	655.6	659.8	664.1	668.3	672.5	677.0	681.7	686.4	691.1	695.8	699.7
42.5°	627.6	632.9	638.0	643.2	648.3	653.4	658.2	663.2	668.0	673.0	677.3
45°	587.9	593.6	599.2	604.8	610.5	616.2	622.1	627.9	633.9	639.7	644.2
47.5°	546.2	552.7	559.1	565.4	571.8	578.3	585.1	591.8	598.5	605.2	610.3
50°	519.2	525.7	532.3	539.0	545.5	552.4	559.8	567.0	574.3	581.6	586.9
52.5°	490.4	497.4	504.3	511.3	518.3	525.7	533.8	541.8	549.9	557.8	563.5
55°	448.4	456.1	463.8	471.6	479.4	487.5	495.9	504.4	512.8	521.3	527.7
57.5°	407.3	415.4	423.4	431.5	439.7	448.3	457.6	466.9	476.1	485.3	491.7
60°	378.6	387.0	395.5	403.9	412.4	421.4	431.1	440.7	450.3	460.0	466.6
62.5°	351.4	360.1	368.8	377.4	386.1	395.5	405.7	415.9	426.1	436.3	442.8
65°	309.8	319.0	328.1	337.3	346.5	356.2	366.6	376.9	387.3	397.6	404.7
67.5°	267.5	277.2	287.0	296.7	306.4	316.6	327.1	337.6	348.1	358.7	366.4
70°	237.9	248.0	258.1	268.2	278.3	289.0	300.3	311.5	322.9	334.2	341.6
72.5°	210.9	221.0	231.1	241.2	251.3	262.2	273.8	285.5	297.1	308.7	316.5
75°	168.1	179.2	190.3	201.3	212.3	223.7	235.4	247.2	258.9	270.7	278.4
77.5°	130.9	142.1	153.2	164.3	175.4	186.9	198.8	210.7	222.5	234.3	242.5
80°	104.7	116.2	127.7	139.3	150.8	162.6	174.8	187.0	199.2	211.5	219.4
82.5°	81.8	93.5	105.2	116.9	128.7	140.7	153.1	165.5	177.9	190.4	198.3
85°	51.8	63.5	75.3	87.1	98.8	110.9	123.4	135.8	148.2	160.8	168.7
87.5°	28.3	40.3	52.4	64.4	76.4	88.8	101.2	113.6	126.0	138.6	146.6
90°	14.5	27.8	41.1	54.3	67.6	81.4	95.6	109.9	124.2	138.5	147.1
92.5°	27.6	37.5	47.4	57.3	67.2	78.9	92.4	105.9	119.4	132.9	141.9
95°	59.8	61.8	63.7	65.7	67.7	75.3	88.9	102.3	115.7	129.2	137.6
97.5°	107.1	112.2	117.2	122.3	127.3	129.1	127.4	125.7	124.1	122.5	130.9
100°	142.9	154.0	165.0	176.0	187.0	184.3	167.7	151.2	134.6	118.1	126.2
102.5°	183.8	193.1	202.4	211.7	221.0	216.0	196.7	177.4	158.1	138.9	141.2
105°	243.8	251.3	258.8	266.4	274.0	275.0	269.2	263.6	257.9	252.2	227.7
107.5°	306.0	312.3	318.6	325.0	331.3	340.5	352.5	364.7	376.8	388.8	372.3
110°	347.4	353.0	358.7	364.4	369.9	378.4	389.7	401.1	412.4	423.7	424.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	387.8	392.5	397.3	402.0	406.8	414.7	425.6	436.6	447.5	458.5	464.4
115°	446.7	450.5	454.3	458.3	462.1	469.1	479.1	489.2	499.2	509.2	516.6
117.5°	504.3	507.4	510.4	513.5	516.5	522.4	531.2	539.9	548.7	557.4	564.4
120°	539.5	542.3	545.0	547.8	550.6	556.0	564.3	572.6	580.9	589.2	596.0
122.5°	576.1	578.0	580.0	581.9	583.8	588.8	596.8	604.8	612.9	621.0	627.1
125°	625.3	626.7	628.1	629.5	631.0	635.4	642.9	650.5	657.9	665.4	670.8
127.5°	674.0	675.1	676.3	677.4	678.6	682.5	688.9	695.4	701.9	708.3	713.6
130°	704.3	705.4	706.6	707.7	708.9	712.3	717.6	723.1	728.4	733.9	739.0
132.5°	732.5	733.9	735.2	736.5	737.9	740.7	745.1	749.3	753.7	758.0	763.0
135°	776.6	777.4	778.3	779.1	779.9	781.9	785.3	788.5	791.8	795.1	799.8
137.5°	814.4	815.5	816.6	817.8	818.9	820.4	822.2	824.0	825.9	827.8	832.3
140°	838.7	839.8	840.8	841.9	842.9	844.0	845.4	846.6	847.8	849.0	853.2
142.5°	862.1	862.9	863.8	864.6	865.6	866.4	867.0	867.7	868.3	869.0	872.7
145°	894.7	895.8	896.8	897.8	898.8	899.4	899.8	900.1	900.5	900.8	903.0
147.5°	924.5	925.3	926.1	927.0	927.8	928.4	928.7	929.0	929.4	929.7	930.6
150°	943.4	944.0	944.5	945.0	945.5	946.0	946.3	946.7	947.1	947.5	947.8
152.5°	960.5	960.8	961.0	961.3	961.5	961.7	961.9	962.1	962.4	962.6	963.2
155°	984.5	984.2	983.8	983.5	983.1	983.0	983.2	983.4	983.5	983.7	984.6
157.5°	1003.1	1003.1	1003.1	1003.0	1003.0	1002.9	1002.7	1002.6	1002.4	1002.2	1003.3
160°	1014.5	1014.3	1014.2	1014.0	1013.8	1013.6	1013.5	1013.3	1013.1	1012.9	1014.0
162.5°	1025.2	1024.8	1024.3	1023.9	1023.4	1023.1	1022.9	1022.8	1022.6	1022.4	1023.6
165°	1038.2	1037.6	1037.1	1036.6	1036.1	1035.7	1035.6	1035.4	1035.2	1035.0	1036.4
167.5°	1048.3	1047.6	1046.9	1046.2	1045.5	1045.1	1045.1	1045.1	1045.1	1045.1	1046.5
170°	1054.0	1053.3	1052.6	1051.9	1051.2	1050.9	1050.9	1050.9	1050.9	1050.9	1052.3
172.5°	1057.7	1056.9	1056.1	1055.2	1054.4	1054.1	1054.2	1054.3	1054.5	1054.6	1056.0
175°	1062.7	1061.8	1061.0	1060.1	1059.1	1058.8	1058.9	1059.1	1059.3	1059.6	1060.8
177.5°	1063.9	1063.3	1062.6	1061.9	1061.2	1060.9	1061.0	1061.2	1061.3	1061.4	1062.6
180°	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7
2.5°	968.7	970.2	971.6	972.3	972.1	971.9	971.7	971.6
5°	967.0	969.0	970.8	971.6	971.4	971.2	971.0	970.7
7.5°	961.2	963.6	965.9	966.9	966.6	966.4	966.1	965.8
10°	955.3	957.7	960.0	961.0	960.5	960.0	959.6	959.1
12.5°	947.4	949.5	951.6	952.5	952.0	951.6	951.1	950.6
15°	932.0	934.4	936.8	937.8	937.6	937.4	937.1	936.9
17.5°	912.1	914.2	916.4	917.3	917.0	916.6	916.3	915.9
20°	897.8	899.9	902.0	903.1	903.4	903.6	903.8	904.1
22.5°	881.9	884.6	887.3	888.6	888.5	888.3	888.2	888.0
25°	855.3	858.3	861.3	862.8	862.8	862.8	862.8	862.8
27.5°	827.3	829.9	832.5	833.9	834.1	834.4	834.6	834.8
30°	808.2	811.0	813.9	815.3	815.3	815.3	815.3	815.3
32.5°	787.4	790.4	793.5	795.3	795.8	796.4	796.9	797.5
35°	756.8	760.3	763.8	766.1	767.0	767.9	768.8	769.8
37.5°	724.9	728.9	732.9	735.3	736.0	736.8	737.5	738.3
40°	703.8	707.7	711.8	714.2	715.2	716.1	717.0	718.0
42.5°	681.7	686.0	690.4	693.3	694.6	695.9	697.2	698.5
45°	648.6	653.1	657.6	660.8	662.7	664.5	666.4	668.3
47.5°	615.3	620.4	625.4	628.6	630.1	631.6	633.0	634.4
50°	592.4	597.7	603.2	606.7	608.3	610.0	611.7	613.3
52.5°	569.1	574.7	580.3	584.1	586.1	588.1	590.2	592.2
55°	534.0	540.4	546.6	550.8	552.7	554.5	556.4	558.4
57.5°	498.2	504.5	510.9	515.2	517.5	519.7	521.8	524.0
60°	473.1	479.7	486.3	490.9	493.4	496.0	498.7	501.2
62.5°	449.5	456.1	462.6	467.1	469.5	471.9	474.3	476.7
65°	411.7	418.7	425.8	430.5	432.8	435.2	437.6	439.9
67.5°	374.1	381.8	389.5	394.4	396.3	398.3	400.3	402.2
70°	349.2	356.7	364.3	369.1	371.5	373.9	376.2	378.6
72.5°	324.2	331.8	339.6	344.7	347.0	349.3	351.6	354.1
75°	286.2	294.0	301.7	307.0	309.8	312.7	315.5	318.3
77.5°	250.6	258.8	267.0	272.2	274.4	276.5	278.7	280.8
80°	227.4	235.4	243.5	248.6	251.0	253.3	255.7	258.0
82.5°	206.3	214.3	222.3	227.4	229.8	232.2	234.5	236.8
85°	176.7	184.7	192.7	197.8	200.2	202.6	204.9	207.2
87.5°	154.8	162.9	171.1	176.3	178.7	181.2	183.6	186.0
90°	155.8	164.5	173.2	178.8	181.6	184.3	187.0	189.7
92.5°	150.8	159.7	168.6	174.3	176.6	179.0	181.4	183.8
95°	146.2	154.7	163.2	168.6	171.0	173.3	175.7	178.0
97.5°	139.3	147.7	156.1	161.6	164.1	166.6	169.2	171.7
100°	134.5	142.7	150.9	156.3	158.9	161.4	163.9	166.4
102.5°	143.4	145.7	147.9	150.5	153.1	155.8	158.4	161.1
105°	203.3	178.7	154.3	143.3	145.7	148.2	150.7	153.2
107.5°	355.9	339.4	323.0	304.0	282.7	261.4	239.9	218.6
110°	424.3	424.7	425.1	413.5	390.4	367.2	344.0	320.7



TEST NUMBER: P331976-840

CATALOG NUMBER: S123DIP-S775D805U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	470.5	476.6	482.6	483.9	480.7	477.5	474.2	471.0
115°	524.0	531.4	538.8	543.8	546.3	549.0	551.5	554.1
117.5°	571.4	578.3	585.4	589.9	591.9	593.8	595.8	597.7
120°	602.8	609.6	616.4	620.7	622.3	623.9	625.6	627.2
122.5°	633.4	639.5	645.7	649.7	651.6	653.3	655.1	656.9
125°	676.0	681.3	686.6	690.2	692.3	694.2	696.2	698.2
127.5°	718.8	724.0	729.2	732.5	733.7	735.0	736.2	737.4
130°	744.2	749.3	754.5	757.6	758.6	759.7	760.7	761.8
132.5°	768.0	773.0	777.9	780.9	782.0	783.2	784.3	785.4
135°	804.6	809.4	814.2	816.8	817.5	818.1	818.8	819.4
137.5°	836.9	841.4	846.0	848.7	849.5	850.3	851.1	851.9
140°	857.5	861.7	865.9	868.4	869.3	870.1	870.9	871.7
142.5°	876.4	880.1	883.8	886.1	886.7	887.4	888.1	888.8
145°	905.2	907.6	909.8	911.3	912.3	913.2	914.1	915.1
147.5°	931.6	932.5	933.4	933.8	933.9	933.9	934.0	934.0
150°	948.1	948.5	948.8	949.0	948.9	948.9	948.8	948.8
152.5°	963.8	964.4	965.1	965.0	964.3	963.6	962.9	962.2
155°	985.5	986.3	987.2	987.1	986.1	985.0	984.0	982.9
157.5°	1004.3	1005.3	1006.4	1006.2	1004.9	1003.5	1002.2	1000.8
160°	1015.0	1016.1	1017.1	1017.0	1015.8	1014.6	1013.4	1012.2
162.5°	1024.8	1026.0	1027.1	1027.2	1026.1	1025.0	1024.0	1022.9
165°	1037.8	1039.3	1040.7	1040.8	1039.6	1038.2	1037.0	1035.8
167.5°	1047.9	1049.4	1050.8	1050.8	1049.4	1047.9	1046.5	1045.1
170°	1053.6	1055.0	1056.4	1056.4	1055.0	1053.6	1052.3	1050.9
172.5°	1057.4	1058.8	1060.3	1060.2	1058.6	1057.1	1055.5	1054.0
175°	1062.0	1063.2	1064.4	1064.3	1063.0	1061.6	1060.2	1058.7
177.5°	1063.7	1064.8	1065.9	1065.8	1064.4	1063.0	1061.6	1060.2
180°	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7

(END OF REPORT)