

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: P332165-830

Luminaire Tested: **S123DIW-S775D1030U830-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332165-830
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: S123DIW-S775D1030U830-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1030 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6416.1 lumens
Efficiency: N/A
Efficacy: 122.0 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

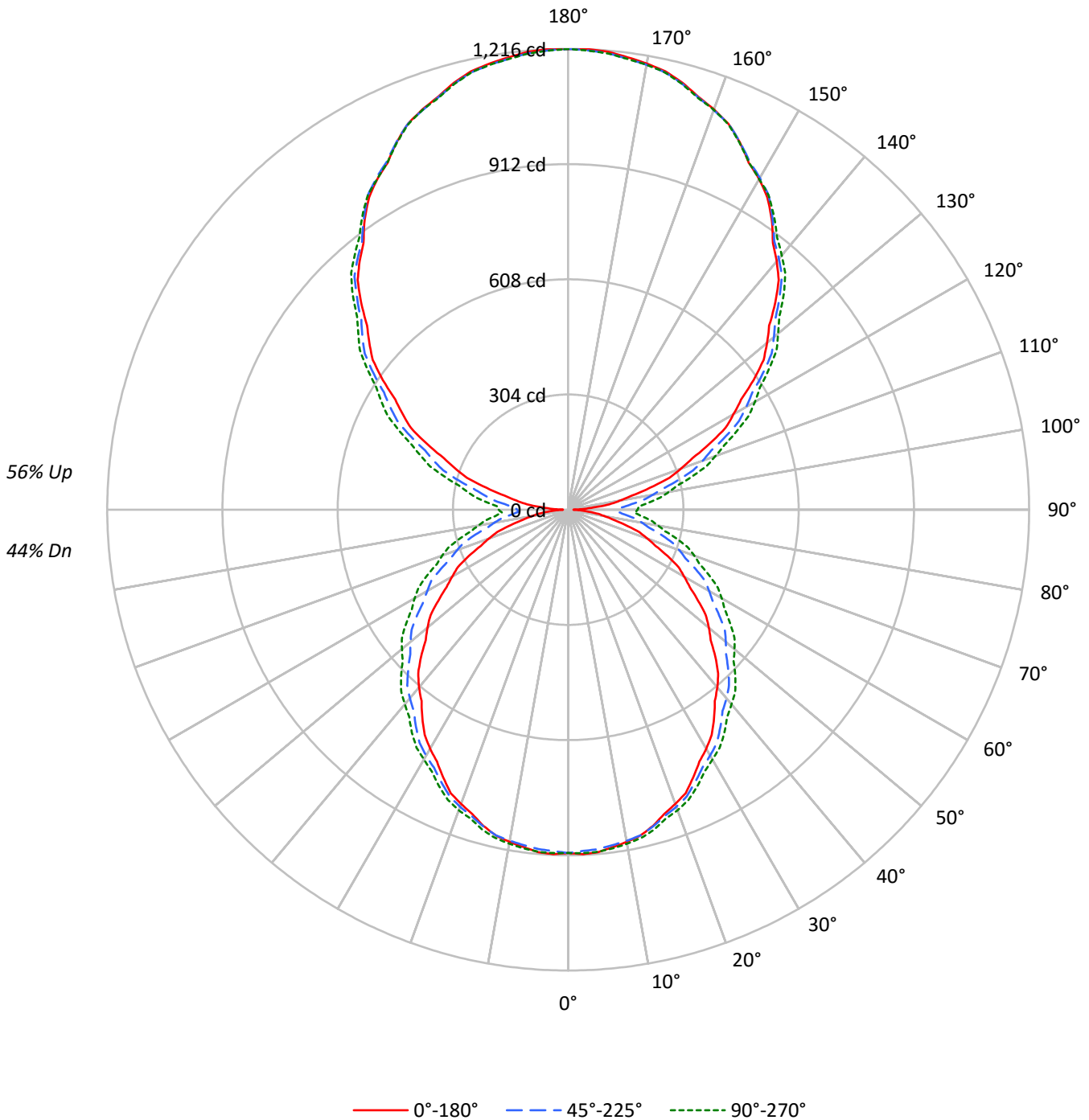
Input Watts (W): 52.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332165-830

CATALOG NUMBER: S123DIW-S775D1030U830-4F0-1E-UDD-D1

Luminous Intensity Polar Plot





TEST NUMBER: P332165-830

CATALOG NUMBER: S123DIW-S775D1030U830-4F0-1E-UDD-D1

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	64	64	64	50	50	50	44
1	95	91	87	83	87	83	79	76	68	66	63	55	53	52	43	42	40	35
2	86	79	72	67	79	72	66	62	59	55	52	48	45	42	37	35	33	28
3	79	69	61	55	71	63	56	51	52	47	43	42	38	35	33	30	28	24
4	72	61	53	46	65	56	49	43	46	41	36	37	33	30	29	26	24	20
5	66	54	46	39	60	49	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	20	18	15
7	56	43	35	30	51	40	33	28	33	28	24	27	23	20	21	18	16	13
8	52	39	32	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	26	21	41	30	24	19	26	20	17	21	17	14	17	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9752	9752	9752
5°	9782	9507	9512
10°	9694	9287	9240
15°	9570	9038	8945
20°	9390	8755	8621
25°	9171	8428	8278
30°	8945	8133	7931
35°	8692	7823	7655
40°	8450	7540	7358
45°	8182	7269	7122
50°	7918	7000	6860
55°	7627	6725	6625
60°	7343	6446	6385
65°	7051	6149	6098
70°	6611	5815	5805
75°	6055	5432	5506
80°	5416	5056	5164
85°	4828	4799	4966



TEST NUMBER: P332165-830

CATALOG NUMBER: S123DIW-S775D1030U830-4F0-1E-UDD-D1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.9	1.3
10°-20°	244.8	3.8
20°-30°	366.2	5.7
30°-40°	437.3	6.8
40°-50°	457.5	7.1
50°-60°	429.4	6.7
60°-70°	358.6	5.6
70°-80°	256.6	4.0
80°-90°	156.6	2.4
90°-100°	175.2	2.7
100°-110°	307.6	4.8
110°-120°	450.2	7.0
120°-130°	557.2	8.7
130°-140°	608.1	9.5
140°-150°	588.4	9.2
150°-160°	493.2	7.7
160°-170°	328.3	5.1
170°-180°	115.0	1.8
0°-30°	696.9	10.9
0°-40°	1134.2	17.7
0°-60°	2021.1	31.5
0°-90°	2792.9	43.5
90°-120°	933.0	14.5
90°-150°	2686.7	41.9
90°-180°	3623.0	56.5
0°-180°	6416.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	906	906	906	906	906	
5°	907	905	899	906	906	86
15°	864	866	866	875	874	243
25°	780	789	792	805	805	359
35°	671	687	700	714	718	420
45°	549	572	597	615	624	423
55°	418	451	486	512	521	375
65°	289	328	371	400	411	286
75°	157	203	253	284	297	168
85°	48	98	150	182	193	51
90°	14	72	134	170	184	12
95°	67	113	168	201	213	72
105°	223	250	299	326	338	238
115°	411	427	459	483	491	407
125°	597	601	626	643	646	532
135°	773	778	787	801	804	595
145°	936	937	940	946	947	584
155°	1070	1070	1071	1075	1069	493
165°	1166	1163	1163	1168	1162	329
175°	1213	1209	1209	1214	1208	115
180°	1216	1216	1216	1216	1216	



TEST NUMBER: P332165-830

CATALOG NUMBER: S123DIW-S775D1030U830-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0
2.5°	909.9	909.4	908.9	908.3	907.9	906.8	905.5	904.1	902.7	901.3	902.7
5°	907.0	906.5	906.1	905.7	905.2	904.4	903.1	901.7	900.4	899.1	900.9
7.5°	898.1	898.1	898.2	898.3	898.4	897.9	896.5	895.3	894.0	892.8	894.9
10°	890.2	890.6	891.1	891.6	891.9	891.6	890.5	889.5	888.3	887.2	889.5
12.5°	880.7	881.4	881.9	882.6	883.2	883.2	882.4	881.7	880.9	880.1	882.1
15°	863.6	864.2	864.9	865.5	866.2	866.4	866.2	866.0	865.7	865.5	867.7
17.5°	841.9	843.2	844.5	845.7	847.1	847.7	847.6	847.5	847.4	847.3	849.3
20°	826.0	827.4	828.7	830.0	831.3	832.2	832.6	833.1	833.5	834.0	835.9
22.5°	809.5	810.8	812.1	813.4	814.7	815.7	816.3	816.9	817.6	818.1	820.7
25°	779.7	781.8	784.0	786.3	788.4	789.9	790.5	791.2	791.8	792.5	795.3
27.5°	749.7	752.1	754.7	757.1	759.7	761.6	763.0	764.4	765.8	767.2	769.7
30°	728.3	731.2	734.1	736.9	739.7	742.1	743.8	745.6	747.3	749.0	751.7
32.5°	704.6	707.8	711.1	714.3	717.5	720.2	722.5	724.8	727.1	729.3	732.2
35°	671.1	674.6	678.2	681.6	685.1	688.3	691.2	694.0	696.9	699.7	703.0
37.5°	635.6	639.5	643.5	647.4	651.4	655.1	658.6	662.1	665.6	669.1	672.9
40°	611.9	615.9	619.8	623.8	627.6	631.9	636.2	640.6	645.0	649.4	653.1
42.5°	585.8	590.7	595.5	600.3	605.1	609.8	614.3	619.0	623.5	628.1	632.2
45°	548.7	554.0	559.2	564.5	569.8	575.1	580.6	586.1	591.6	597.1	601.2
47.5°	509.8	515.9	521.8	527.7	533.7	539.8	546.1	552.3	558.6	564.9	569.6
50°	484.6	490.7	496.8	503.0	509.2	515.6	522.5	529.2	536.0	542.8	547.8
52.5°	457.7	464.2	470.7	477.2	483.7	490.7	498.2	505.7	513.2	520.7	525.9
55°	418.5	425.7	432.9	440.2	447.4	455.0	462.9	470.8	478.6	486.5	492.5
57.5°	380.1	387.7	395.2	402.7	410.4	418.4	427.1	435.7	444.3	453.0	458.9
60°	353.4	361.2	369.1	377.0	384.9	393.3	402.4	411.3	420.3	429.3	435.5
62.5°	328.0	336.1	344.2	352.2	360.3	369.1	378.6	388.1	397.7	407.2	413.3
65°	289.2	297.7	306.2	314.8	323.4	332.4	342.1	351.8	361.5	371.1	377.7
67.5°	249.7	258.7	267.9	276.9	286.0	295.5	305.3	315.1	324.9	334.8	342.0
70°	222.1	231.5	240.9	250.3	259.8	269.8	280.3	290.8	301.3	311.9	318.9
72.5°	196.8	206.2	215.7	225.1	234.5	244.7	255.5	266.5	277.3	288.1	295.4
75°	156.9	167.2	177.6	187.8	198.1	208.8	219.7	230.7	241.7	252.7	259.9
77.5°	122.2	132.6	143.0	153.4	163.7	174.5	185.6	196.6	207.6	218.7	226.3
80°	97.7	108.5	119.2	130.0	140.7	151.7	163.2	174.6	186.0	197.4	204.8
82.5°	76.3	87.3	98.2	109.1	120.1	131.3	142.9	154.5	166.1	177.7	185.1
85°	48.4	59.3	70.3	81.2	92.2	103.5	115.2	126.8	138.4	150.1	157.5
87.5°	26.5	37.8	49.1	60.5	71.8	83.4	95.1	106.9	118.6	130.4	138.0
90°	13.8	26.7	39.5	52.4	65.2	78.7	92.7	106.5	120.5	134.4	142.7
92.5°	35.2	46.3	57.4	68.5	79.7	91.5	104.2	116.7	129.3	141.9	149.9
95°	67.2	77.2	87.3	97.3	107.4	118.6	131.0	143.5	155.9	168.3	176.0
97.5°	109.7	118.6	127.4	136.2	145.1	155.2	166.7	178.1	189.6	201.1	208.7
100°	138.7	147.0	155.3	163.6	171.9	181.6	192.7	204.0	215.1	226.2	233.2
102.5°	172.3	179.5	186.5	193.6	200.7	209.8	221.1	232.5	243.8	255.1	261.9
105°	222.7	228.5	234.1	239.8	245.5	254.0	265.3	276.7	288.0	299.4	305.5
107.5°	280.4	285.1	289.8	294.5	299.3	306.5	316.2	325.9	335.6	345.3	351.9
110°	316.2	320.7	325.0	329.4	333.8	340.5	349.8	358.9	368.2	377.3	383.9



TEST NUMBER: P332165-830

CATALOG NUMBER: S123DIW-S775D1030U830-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	354.5	358.0	361.5	365.0	368.4	374.5	383.0	391.4	400.0	408.5	415.0
115°	410.8	414.1	417.3	420.6	423.9	429.2	436.7	444.1	451.7	459.1	464.6
117.5°	468.3	470.3	472.3	474.4	476.5	480.9	487.8	494.6	501.4	508.3	513.5
120°	503.3	505.8	508.1	510.5	512.8	517.1	523.3	529.4	535.6	541.8	546.7
122.5°	540.8	542.3	543.8	545.3	546.8	550.7	557.0	563.4	569.8	576.1	580.4
125°	596.9	597.6	598.1	598.8	599.5	602.8	608.7	614.6	620.6	626.5	630.3
127.5°	649.6	650.7	651.9	653.0	654.2	657.1	661.9	666.8	671.6	676.4	679.5
130°	684.8	686.3	687.7	689.2	690.7	693.3	697.0	700.8	704.6	708.3	711.6
132.5°	719.2	720.8	722.5	724.1	725.8	728.1	731.1	734.1	737.2	740.3	743.2
135°	772.6	773.6	774.7	775.7	776.8	778.4	780.6	782.8	785.0	787.2	790.3
137.5°	822.1	822.9	823.8	824.7	825.6	827.0	828.9	830.8	832.7	834.6	837.2
140°	855.6	856.7	857.7	858.8	859.9	860.8	861.7	862.6	863.5	864.3	867.4
142.5°	886.9	887.9	888.7	889.6	890.5	891.2	891.7	892.2	892.8	893.2	896.0
145°	935.9	936.0	936.2	936.4	936.7	937.1	937.7	938.4	939.0	939.6	941.1
147.5°	977.6	978.4	979.1	980.0	980.7	981.4	981.9	982.6	983.2	983.7	984.3
150°	1007.4	1007.9	1008.2	1008.7	1009.1	1009.6	1009.9	1010.4	1010.8	1011.3	1011.3
152.5°	1031.9	1032.5	1033.0	1033.7	1034.3	1034.6	1034.9	1035.2	1035.5	1035.7	1036.0
155°	1070.4	1070.4	1070.4	1070.4	1070.4	1070.5	1070.7	1071.0	1071.2	1071.4	1072.2
157.5°	1103.3	1103.1	1102.8	1102.5	1102.3	1102.2	1102.4	1102.6	1102.8	1102.9	1103.8
160°	1123.9	1123.5	1123.0	1122.7	1122.2	1122.0	1122.0	1122.0	1122.0	1122.0	1123.0
162.5°	1142.3	1141.7	1141.0	1140.5	1139.9	1139.6	1139.8	1140.0	1140.2	1140.4	1141.4
165°	1165.9	1165.3	1164.7	1164.0	1163.4	1163.1	1163.1	1163.1	1163.1	1163.1	1164.3
167.5°	1184.9	1184.0	1183.2	1182.3	1181.5	1181.1	1181.3	1181.5	1181.7	1181.8	1183.1
170°	1195.5	1194.7	1193.8	1193.0	1192.1	1191.8	1191.8	1191.8	1191.8	1191.8	1193.2
172.5°	1203.9	1203.1	1202.2	1201.4	1200.5	1200.1	1200.1	1200.1	1200.1	1200.1	1201.5
175°	1212.8	1211.9	1211.1	1210.2	1209.4	1208.9	1208.9	1208.9	1208.9	1208.9	1210.2
177.5°	1216.4	1215.7	1215.0	1214.3	1213.6	1213.3	1213.3	1213.3	1213.3	1213.3	1214.3
180°	1215.6	1215.6	1215.6	1215.6	1215.6	1215.6	1215.6	1215.6	1215.6	1215.6	1215.6



TEST NUMBER: P332165-830

CATALOG NUMBER: S123DIW-S775D1030U830-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0
2.5°	904.1	905.5	906.8	907.5	907.3	907.1	906.9	906.8
5°	902.6	904.4	906.1	906.8	906.6	906.4	906.3	906.0
7.5°	897.1	899.4	901.5	902.5	902.2	902.0	901.7	901.4
10°	891.6	893.8	896.0	896.9	896.5	896.0	895.6	895.1
12.5°	884.2	886.2	888.2	889.0	888.5	888.2	887.7	887.2
15°	869.9	872.1	874.3	875.2	875.1	874.9	874.6	874.4
17.5°	851.3	853.3	855.3	856.1	855.8	855.5	855.2	854.9
20°	837.9	839.9	841.9	842.9	843.2	843.4	843.6	843.9
22.5°	823.1	825.7	828.1	829.3	829.2	829.1	829.0	828.8
25°	798.2	801.1	803.9	805.3	805.3	805.3	805.3	805.3
27.5°	772.1	774.6	777.0	778.4	778.5	778.7	778.9	779.1
30°	754.3	757.0	759.6	760.9	760.9	760.9	760.9	760.9
32.5°	734.9	737.7	740.6	742.3	742.7	743.3	743.8	744.3
35°	706.3	709.6	712.8	715.0	715.9	716.7	717.6	718.5
37.5°	676.6	680.3	684.0	686.3	686.9	687.7	688.3	689.1
40°	656.9	660.5	664.3	666.6	667.5	668.4	669.2	670.1
42.5°	636.2	640.3	644.4	647.1	648.3	649.5	650.7	652.0
45°	605.4	609.5	613.8	616.7	618.5	620.2	622.0	623.8
47.5°	574.3	579.0	583.7	586.7	588.1	589.5	590.8	592.1
50°	552.9	557.9	563.0	566.3	567.8	569.3	570.9	572.4
52.5°	531.1	536.4	541.6	545.2	547.1	548.9	550.8	552.7
55°	498.4	504.4	510.2	514.1	515.9	517.6	519.3	521.1
57.5°	465.0	470.9	476.8	480.9	483.0	485.0	487.0	489.1
60°	441.6	447.7	453.8	458.2	460.5	463.0	465.4	467.8
62.5°	419.5	425.7	431.8	435.9	438.2	440.5	442.7	444.9
65°	384.3	390.8	397.4	401.8	404.0	406.1	408.4	410.6
67.5°	349.1	356.4	363.5	368.1	369.9	371.7	373.6	375.4
70°	325.9	332.9	340.0	344.5	346.8	348.9	351.1	353.4
72.5°	302.6	309.7	317.0	321.7	323.9	326.0	328.2	330.5
75°	267.1	274.4	281.6	286.5	289.2	291.8	294.5	297.1
77.5°	233.9	241.6	249.2	254.0	256.1	258.1	260.1	262.1
80°	212.3	219.7	227.2	232.1	234.2	236.4	238.7	240.8
82.5°	192.6	200.0	207.5	212.3	214.5	216.7	218.9	221.0
85°	164.9	172.4	179.8	184.6	186.8	189.1	191.2	193.4
87.5°	145.5	153.2	160.8	165.8	168.1	170.3	172.6	174.8
90°	151.1	159.4	167.7	173.1	175.8	178.3	181.0	183.6
92.5°	157.8	165.8	173.7	178.6	180.3	182.1	183.9	185.6
95°	183.7	191.3	199.0	203.9	206.0	208.3	210.5	212.6
97.5°	216.2	223.7	231.2	236.0	238.2	240.3	242.3	244.5
100°	240.3	247.2	254.2	259.0	261.6	264.3	266.8	269.5
102.5°	268.7	275.6	282.4	286.8	289.0	291.1	293.2	295.3
105°	311.7	317.8	324.0	328.2	330.6	333.0	335.4	337.8
107.5°	358.4	365.0	371.6	375.7	377.4	379.1	380.7	382.4
110°	390.4	397.0	403.5	407.5	408.8	410.1	411.4	412.8



TEST NUMBER: P332165-830

CATALOG NUMBER: S123DIW-S775D1030U830-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	421.6	428.1	434.7	438.8	440.7	442.5	444.4	446.3
115°	470.0	475.5	481.0	484.5	486.1	487.6	489.2	490.7
117.5°	518.7	523.9	529.0	532.2	533.3	534.4	535.6	536.7
120°	551.5	556.3	561.2	564.1	565.2	566.4	567.4	568.5
122.5°	584.7	589.0	593.3	596.0	596.9	597.9	598.8	599.7
125°	634.0	637.7	641.5	643.8	644.4	645.1	645.8	646.5
127.5°	682.7	685.8	688.9	690.8	691.3	691.8	692.3	692.9
130°	714.9	718.2	721.5	723.1	722.9	722.8	722.6	722.5
132.5°	746.2	749.1	752.1	753.8	754.1	754.5	754.8	755.2
135°	793.4	796.5	799.7	801.5	802.2	802.9	803.5	804.2
137.5°	839.8	842.4	844.9	846.3	846.7	847.0	847.3	847.5
140°	870.4	873.5	876.7	878.0	877.6	877.2	876.8	876.4
142.5°	898.7	901.4	904.2	905.5	905.4	905.4	905.3	905.3
145°	942.7	944.2	945.8	946.6	946.6	946.6	946.7	946.7
147.5°	984.8	985.3	985.8	985.9	985.4	984.9	984.4	983.9
150°	1011.3	1011.3	1011.3	1010.8	1010.0	1009.2	1008.3	1007.5
152.5°	1036.3	1036.7	1037.1	1036.7	1035.7	1034.7	1033.7	1032.6
155°	1073.1	1073.9	1074.8	1074.5	1073.0	1071.5	1070.1	1068.6
157.5°	1104.7	1105.6	1106.5	1106.4	1105.1	1104.0	1102.8	1101.5
160°	1124.2	1125.2	1126.2	1126.3	1125.5	1124.6	1123.8	1122.9
162.5°	1142.5	1143.5	1144.6	1144.4	1143.1	1141.7	1140.4	1139.0
165°	1165.6	1166.9	1168.2	1168.1	1166.6	1165.1	1163.6	1162.2
167.5°	1184.4	1185.7	1187.0	1187.0	1185.7	1184.4	1183.1	1181.8
170°	1194.7	1196.2	1197.7	1197.7	1196.2	1194.7	1193.2	1191.8
172.5°	1202.8	1204.1	1205.4	1205.3	1203.8	1202.3	1200.8	1199.4
175°	1211.4	1212.8	1214.0	1213.9	1212.4	1210.9	1209.5	1208.0
177.5°	1215.3	1216.4	1217.4	1217.3	1216.1	1214.9	1213.7	1212.6
180°	1215.6	1215.6	1215.6	1215.6	1215.6	1215.6	1215.6	1215.6

(END OF REPORT)