

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: P332436-830

Luminaire Tested: **S123RDIW-S775D755U830-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332436-830
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: S123RDIW-S775D755U830-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 755 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5598.6 lumens
Efficiency: N/A
Efficacy: 124.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

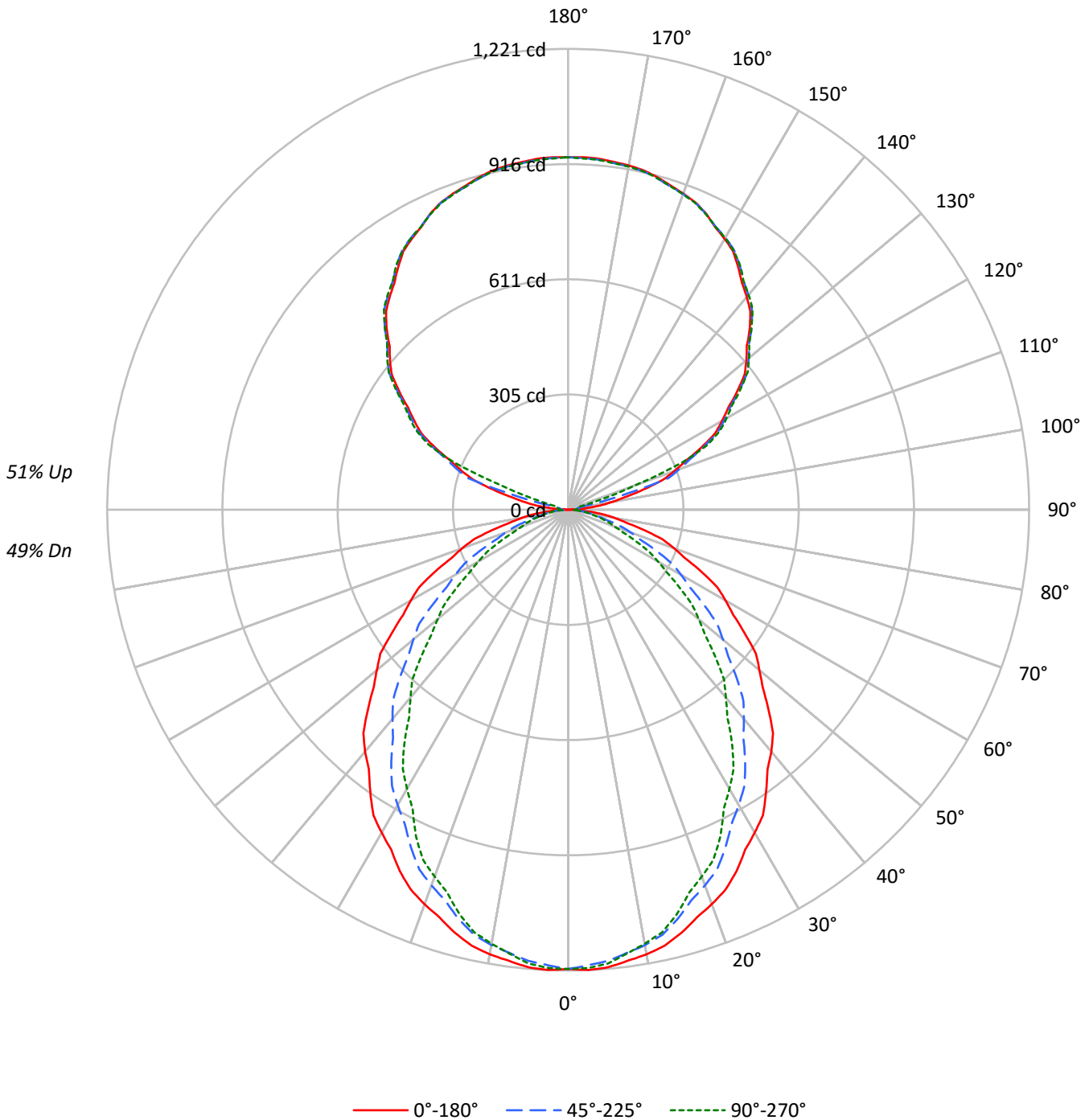
Input Watts (W): 45
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	55	55	55	49
1	98	94	90	87	90	87	83	80	73	71	69	61	59	58	49	48	47	42
2	89	82	76	71	82	76	71	66	64	61	57	54	51	49	44	42	40	36
3	82	73	65	60	75	67	61	56	57	52	49	48	44	42	39	37	35	31
4	75	64	57	51	69	60	53	48	51	46	42	43	39	36	35	32	30	27
5	69	57	49	44	63	53	46	41	46	40	36	38	34	31	32	29	26	23
6	64	52	44	38	58	48	41	36	41	36	32	35	31	27	29	26	23	21
7	59	47	39	33	54	44	37	32	37	32	28	32	28	24	26	23	21	18
8	55	42	35	30	50	40	33	28	34	29	25	29	25	22	24	21	19	16
9	51	39	31	26	47	36	30	25	31	26	22	27	23	20	23	19	17	15
10	48	36	28	24	44	33	27	23	29	24	20	25	21	18	21	18	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13099	13099	13099
5°	13149	12967	13042
10°	13074	12804	12761
15°	12933	12504	12373
20°	12741	12129	11848
25°	12542	11709	11334
30°	12279	11225	10611
35°	12009	10738	9947
40°	11760	10165	9125
45°	11432	9601	8383
50°	11072	8957	7552
55°	10704	8223	6778
60°	10368	7436	5927
65°	9928	6584	5076
70°	9379	5530	4101
75°	8576	4350	3855
80°	7649	3856	3546
85°	6459	3409	3162



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.3	2.0
10°-20°	317.9	5.7
20°-30°	457.8	8.2
30°-40°	515.7	9.2
40°-50°	493.3	8.8
50°-60°	404.0	7.2
60°-70°	272.6	4.9
70°-80°	137.1	2.4
80°-90°	38.9	0.7
90°-100°	33.9	0.6
100°-110°	161.8	2.9
110°-120°	388.6	6.9
120°-130°	494.8	8.8
130°-140°	528.7	9.4
140°-150°	494.4	8.8
150°-160°	398.8	7.1
160°-170°	257.4	4.6
170°-180°	88.7	1.6
0°-30°	890.0	15.9
0°-40°	1405.7	25.1
0°-60°	2303.0	41.1
0°-90°	2751.6	49.1
90°-120°	584.3	10.4
90°-150°	2102.1	37.5
90°-180°	2847.0	50.9
0°-180°	5598.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1217	1217	1217	1217	1217	
5°	1217	1212	1200	1208	1207	115
15°	1161	1149	1122	1117	1110	327
25°	1056	1030	986	966	954	485
35°	914	877	817	776	757	572
45°	751	705	631	576	551	579
55°	570	520	438	383	361	511
65°	390	334	258	212	199	386
75°	206	159	105	95	93	220
85°	52	32	28	26	26	59
90°	1	8	17	19	21	5
95°	42	16	22	26	26	52
105°	207	210	152	36	30	219
115°	388	392	398	405	408	383
125°	547	552	555	556	558	488
135°	680	684	687	689	687	524
145°	785	790	791	793	793	491
155°	865	864	864	867	864	398
165°	912	910	909	914	910	258
175°	934	930	931	935	930	89
180°	934	934	934	934	934	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9
2.5°	1220.8	1220.1	1219.4	1218.7	1218.0	1216.6	1214.5	1212.4	1210.3	1208.2	1210.1
5°	1216.9	1215.8	1214.7	1213.6	1212.5	1210.6	1208.0	1205.3	1202.7	1200.1	1202.0
7.5°	1205.6	1204.5	1203.2	1202.0	1200.9	1198.5	1195.1	1191.8	1188.4	1184.9	1186.0
10°	1196.2	1194.6	1193.1	1191.6	1190.0	1187.2	1183.3	1179.4	1175.4	1171.5	1171.7
12.5°	1182.7	1181.0	1179.3	1177.6	1175.9	1172.6	1167.8	1163.0	1158.1	1153.3	1153.2
15°	1160.6	1158.2	1155.7	1153.4	1150.9	1146.7	1140.6	1134.4	1128.2	1122.1	1121.1
17.5°	1132.7	1130.0	1127.2	1124.4	1121.5	1116.3	1108.4	1100.6	1092.8	1085.1	1082.7
20°	1112.3	1108.7	1105.2	1101.7	1098.3	1092.3	1083.9	1075.6	1067.3	1058.9	1056.1
22.5°	1089.4	1085.3	1081.3	1077.2	1073.2	1066.8	1057.9	1049.0	1040.2	1031.3	1027.7
25°	1056.0	1050.6	1045.0	1039.5	1034.1	1026.2	1016.2	1006.1	996.0	985.9	981.3
27.5°	1015.5	1009.5	1003.4	997.4	991.4	982.7	971.5	960.3	949.0	937.7	931.3
30°	987.9	981.3	974.8	968.2	961.6	952.2	939.9	927.6	915.3	903.1	895.6
32.5°	960.3	952.8	945.4	937.9	930.5	920.2	907.2	894.3	881.3	868.3	860.2
35°	913.9	906.0	898.1	890.2	882.3	871.6	858.0	844.3	830.8	817.2	807.8
37.5°	867.0	858.1	849.3	840.6	831.8	820.2	805.7	791.2	776.7	762.1	751.4
40°	836.9	827.3	817.6	807.9	798.3	785.7	770.2	754.6	739.0	723.4	712.0
42.5°	803.0	793.3	783.6	774.0	764.4	751.5	735.4	719.3	703.2	687.1	674.7
45°	751.0	741.2	731.3	721.4	711.5	698.2	681.3	664.4	647.5	630.7	618.1
47.5°	699.2	688.3	677.5	666.7	655.8	642.0	625.1	608.1	591.3	574.4	560.8
50°	661.2	650.9	640.6	630.3	620.0	606.0	588.2	570.4	552.7	534.9	521.3
52.5°	627.3	616.1	604.9	593.7	582.6	568.2	550.5	533.0	515.4	497.8	483.7
55°	570.4	559.7	548.9	538.2	527.4	512.7	494.1	475.5	456.9	438.2	425.5
57.5°	517.9	506.2	494.6	482.8	471.1	455.9	437.2	418.4	399.6	381.0	368.9
60°	481.6	469.6	457.5	445.4	433.4	418.2	400.0	381.8	363.6	345.4	333.6
62.5°	445.3	433.2	421.1	409.1	397.1	381.9	363.7	345.5	327.3	309.1	297.9
65°	389.8	377.8	365.7	353.6	341.6	327.0	309.9	292.8	275.7	258.5	247.8
67.5°	334.4	322.2	310.0	297.7	285.6	271.3	254.9	238.5	222.1	205.7	197.7
70°	298.0	286.3	274.4	262.5	250.7	237.0	221.7	206.4	191.1	175.7	168.0
72.5°	261.7	250.1	238.4	226.7	215.1	202.3	188.3	174.4	160.4	146.5	140.2
75°	206.2	195.8	185.2	174.7	164.2	152.9	140.8	128.8	116.7	104.6	102.5
77.5°	155.7	146.2	136.7	127.1	117.6	109.1	101.2	93.5	85.8	77.9	76.8
80°	123.4	114.3	105.4	96.4	87.4	80.6	76.0	71.4	66.8	62.2	61.5
82.5°	92.6	84.8	77.0	69.3	61.5	56.6	54.4	52.2	50.1	48.0	47.3
85°	52.3	47.5	42.7	37.8	33.0	30.3	29.6	28.9	28.3	27.6	27.2
87.5°	19.1	17.4	15.8	14.2	12.6	12.0	12.3	12.8	13.2	13.6	13.6
90°	0.7	2.3	3.8	5.3	6.9	8.7	10.7	12.6	14.6	16.7	17.2
92.5°	12.9	12.4	12.1	11.6	11.2	11.7	13.2	14.7	16.2	17.7	18.8
95°	42.3	36.0	29.7	23.4	17.1	14.7	16.4	18.1	19.8	21.5	22.6
97.5°	85.0	82.2	79.4	76.5	73.7	66.7	55.6	44.5	33.5	22.3	23.6
100°	117.3	120.3	123.4	126.5	129.5	119.0	95.0	71.0	46.9	22.9	24.1
102.5°	153.8	156.1	158.3	160.5	162.7	150.7	124.4	98.1	71.9	45.6	41.8
105°	206.7	208.4	210.1	211.8	213.5	207.4	193.5	179.6	165.8	151.9	124.6
107.5°	262.4	263.8	265.1	266.6	267.9	269.7	271.8	274.0	276.3	278.4	258.4
110°	299.6	300.9	302.1	303.3	304.5	306.0	307.7	309.4	311.1	312.8	307.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	335.2	336.2	337.3	338.5	339.6	341.0	342.7	344.4	346.1	347.8	347.9
115°	387.7	388.6	389.6	390.5	391.4	392.6	394.0	395.3	396.7	398.1	399.6
117.5°	438.7	439.8	440.9	442.1	443.2	444.1	444.8	445.5	446.2	447.0	448.2
120°	470.2	471.6	473.1	474.4	475.8	476.7	477.2	477.7	478.2	478.5	479.8
122.5°	502.5	503.6	504.7	505.9	507.0	507.8	508.4	509.1	509.6	510.2	511.0
125°	546.6	547.8	549.0	550.3	551.5	552.4	553.0	553.6	554.2	554.9	555.2
127.5°	589.3	590.5	591.7	593.0	594.2	595.2	596.0	596.6	597.4	598.1	598.6
130°	615.9	617.2	618.4	619.6	620.9	621.8	622.4	623.0	623.6	624.2	624.8
132.5°	641.4	642.6	643.9	645.1	646.4	647.2	647.7	648.2	648.7	649.2	649.8
135°	680.4	681.4	682.2	683.2	684.1	684.9	685.5	686.1	686.7	687.3	687.8
137.5°	713.7	714.8	716.0	717.2	718.4	719.2	719.4	719.8	720.2	720.5	721.2
140°	735.8	736.8	737.7	738.7	739.6	740.3	740.7	741.2	741.7	742.2	742.7
142.5°	756.4	757.3	758.3	759.2	760.2	760.8	761.3	761.8	762.2	762.7	763.2
145°	785.1	786.2	787.3	788.3	789.5	790.1	790.4	790.8	791.1	791.4	791.6
147.5°	812.2	812.8	813.6	814.3	815.0	815.5	815.9	816.1	816.4	816.7	817.1
150°	828.9	829.2	829.7	830.2	830.7	831.0	831.4	831.7	832.0	832.3	832.6
152.5°	843.8	844.0	844.2	844.4	844.7	844.9	845.1	845.3	845.5	845.6	846.1
155°	864.9	864.6	864.3	863.9	863.7	863.6	863.7	863.9	864.0	864.2	865.0
157.5°	881.3	881.3	881.2	881.2	881.2	881.1	880.9	880.7	880.6	880.4	881.4
160°	891.3	891.1	891.0	890.8	890.6	890.5	890.3	890.1	890.0	889.9	890.8
162.5°	900.7	900.3	899.8	899.5	899.1	898.8	898.6	898.5	898.3	898.1	899.3
165°	912.1	911.6	911.2	910.7	910.2	909.9	909.7	909.6	909.5	909.3	910.5
167.5°	921.0	920.3	919.7	919.1	918.5	918.1	918.1	918.1	918.1	918.1	919.4
170°	926.0	925.3	924.7	924.1	923.5	923.1	923.1	923.1	923.1	923.1	924.4
172.5°	929.3	928.5	927.7	927.1	926.3	926.0	926.1	926.2	926.3	926.5	927.7
175°	933.6	932.7	932.0	931.2	930.5	930.2	930.3	930.5	930.7	930.8	931.9
177.5°	934.6	934.1	933.4	932.8	932.2	932.0	932.1	932.2	932.4	932.5	933.4
180°	933.6	933.6	933.6	933.6	933.6	933.6	933.6	933.6	933.6	933.6	933.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9
2.5°	1212.0	1214.0	1215.9	1216.7	1216.4	1216.0	1215.6	1215.3
5°	1204.0	1206.0	1208.0	1208.7	1208.3	1207.9	1207.4	1207.0
7.5°	1187.1	1188.2	1189.3	1189.5	1188.7	1188.0	1187.2	1186.5
10°	1172.0	1172.1	1172.3	1172.0	1170.8	1169.7	1168.7	1167.5
12.5°	1153.0	1152.9	1152.8	1152.1	1150.8	1149.5	1148.3	1147.0
15°	1119.9	1118.8	1117.8	1116.4	1114.9	1113.3	1111.8	1110.3
17.5°	1080.3	1078.1	1075.7	1073.5	1071.1	1068.8	1066.6	1064.3
20°	1053.3	1050.4	1047.5	1044.8	1042.2	1039.5	1036.9	1034.3
22.5°	1024.3	1020.7	1017.1	1014.1	1011.6	1009.2	1006.7	1004.3
25°	976.8	972.1	967.5	964.0	961.6	959.1	956.8	954.3
27.5°	924.9	918.6	912.2	907.1	903.4	899.8	896.1	892.4
30°	888.2	880.6	873.2	867.7	864.2	860.7	857.1	853.7
32.5°	852.0	843.9	835.7	829.7	826.0	822.4	818.7	815.0
35°	798.3	788.9	779.5	772.8	768.8	764.9	760.9	757.0
37.5°	740.6	730.0	719.3	711.5	706.6	701.7	696.9	692.0
40°	700.6	689.2	677.8	669.6	664.5	659.5	654.4	649.4
42.5°	662.1	649.7	637.3	628.8	624.2	619.7	615.2	610.7
45°	605.7	593.1	580.6	571.7	566.5	561.2	556.0	550.7
47.5°	547.1	533.6	520.0	510.9	506.1	501.4	496.8	492.1
50°	507.7	494.1	480.5	471.2	466.2	461.1	456.1	451.0
52.5°	469.6	455.4	441.3	432.0	427.4	422.9	418.4	413.9
55°	412.7	400.0	387.3	378.7	374.4	369.9	365.6	361.2
57.5°	356.9	344.9	332.9	325.0	321.3	317.5	313.8	310.1
60°	321.7	309.9	298.0	290.3	286.5	282.8	279.1	275.3
62.5°	286.8	275.7	264.6	257.0	253.1	249.2	245.3	241.4
65°	237.0	226.3	215.6	209.0	206.6	204.2	201.8	199.3
67.5°	189.6	181.6	173.5	168.2	165.7	163.1	160.5	157.9
70°	160.3	152.6	145.0	140.0	137.5	135.1	132.7	130.3
72.5°	133.9	127.6	121.4	117.7	116.7	115.7	114.7	113.7
75°	100.2	98.0	95.9	94.5	94.1	93.7	93.2	92.7
77.5°	75.6	74.4	73.2	72.4	72.0	71.5	71.1	70.7
80°	60.9	60.2	59.6	59.0	58.5	58.2	57.7	57.2
82.5°	46.7	46.0	45.3	45.0	44.9	44.8	44.7	44.6
85°	26.8	26.3	25.9	25.6	25.6	25.6	25.6	25.6
87.5°	13.5	13.5	13.4	13.3	13.2	13.1	13.0	12.8
90°	17.9	18.5	19.1	19.6	19.9	20.2	20.5	20.8
92.5°	19.7	20.7	21.7	22.2	22.4	22.6	22.8	23.0
95°	23.7	24.7	25.8	26.4	26.4	26.4	26.4	26.4
97.5°	24.8	26.0	27.2	28.0	28.1	28.3	28.5	28.6
100°	25.4	26.6	27.8	28.6	28.7	28.8	28.9	29.1
102.5°	38.0	34.2	30.3	28.6	28.8	29.1	29.4	29.7
105°	97.4	70.0	42.8	29.3	29.6	29.9	30.3	30.5
107.5°	238.4	218.4	198.4	178.1	157.5	137.0	116.4	95.9
110°	302.7	297.6	292.5	278.9	256.8	234.8	212.7	190.8



TEST NUMBER: P332436-830

CATALOG NUMBER: S123RDIW-S775D755U830-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	348.0	348.1	348.2	345.8	341.2	336.6	331.9	327.3
115°	401.2	402.7	404.3	405.4	406.0	406.6	407.2	407.8
117.5°	449.4	450.6	451.9	452.5	452.7	452.8	452.9	453.1
120°	481.1	482.3	483.5	484.1	484.1	484.1	484.1	484.1
122.5°	511.9	512.7	513.7	514.2	514.3	514.3	514.5	514.6
125°	555.4	555.8	556.1	556.4	556.8	557.0	557.3	557.6
127.5°	599.2	599.6	600.1	600.2	599.9	599.6	599.3	599.0
130°	625.5	626.0	626.7	626.9	626.5	626.2	625.9	625.6
132.5°	650.4	651.0	651.7	651.8	651.3	650.9	650.4	650.0
135°	688.2	688.7	689.2	689.2	688.7	688.2	687.8	687.3
137.5°	722.0	722.7	723.5	723.7	723.4	723.0	722.7	722.5
140°	743.4	743.9	744.6	744.8	744.4	744.1	743.9	743.5
142.5°	763.6	764.1	764.6	764.7	764.2	763.8	763.4	762.9
145°	792.0	792.3	792.6	792.8	792.8	792.8	792.8	792.8
147.5°	817.4	817.7	818.0	817.7	817.1	816.3	815.7	814.9
150°	832.9	833.2	833.5	833.5	833.0	832.5	832.1	831.6
152.5°	846.7	847.3	847.8	847.7	847.1	846.3	845.6	844.9
155°	865.7	866.5	867.3	867.2	866.3	865.3	864.4	863.5
157.5°	882.3	883.2	884.1	884.0	882.8	881.6	880.4	879.2
160°	891.7	892.7	893.5	893.5	892.4	891.4	890.2	889.2
162.5°	900.3	901.4	902.4	902.4	901.4	900.5	899.6	898.6
165°	911.7	912.9	914.2	914.3	913.2	912.1	911.1	909.9
167.5°	920.6	921.9	923.1	923.1	921.9	920.6	919.4	918.1
170°	925.6	926.9	928.1	928.1	926.9	925.6	924.4	923.1
172.5°	929.0	930.2	931.4	931.3	930.0	928.7	927.3	926.0
175°	932.9	934.1	935.1	935.0	933.8	932.6	931.3	930.1
177.5°	934.4	935.4	936.4	936.2	935.0	933.8	932.6	931.3
180°	933.6	933.6	933.6	933.6	933.6	933.6	933.6	933.6

(END OF REPORT)