

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: P332910-830

Luminaire Tested: **S124RDIP-S575D810U830-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332910-830
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: S124RDIP-S575D810U830-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 810 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5263.8 lumens
Efficiency: N/A
Efficacy: 137.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

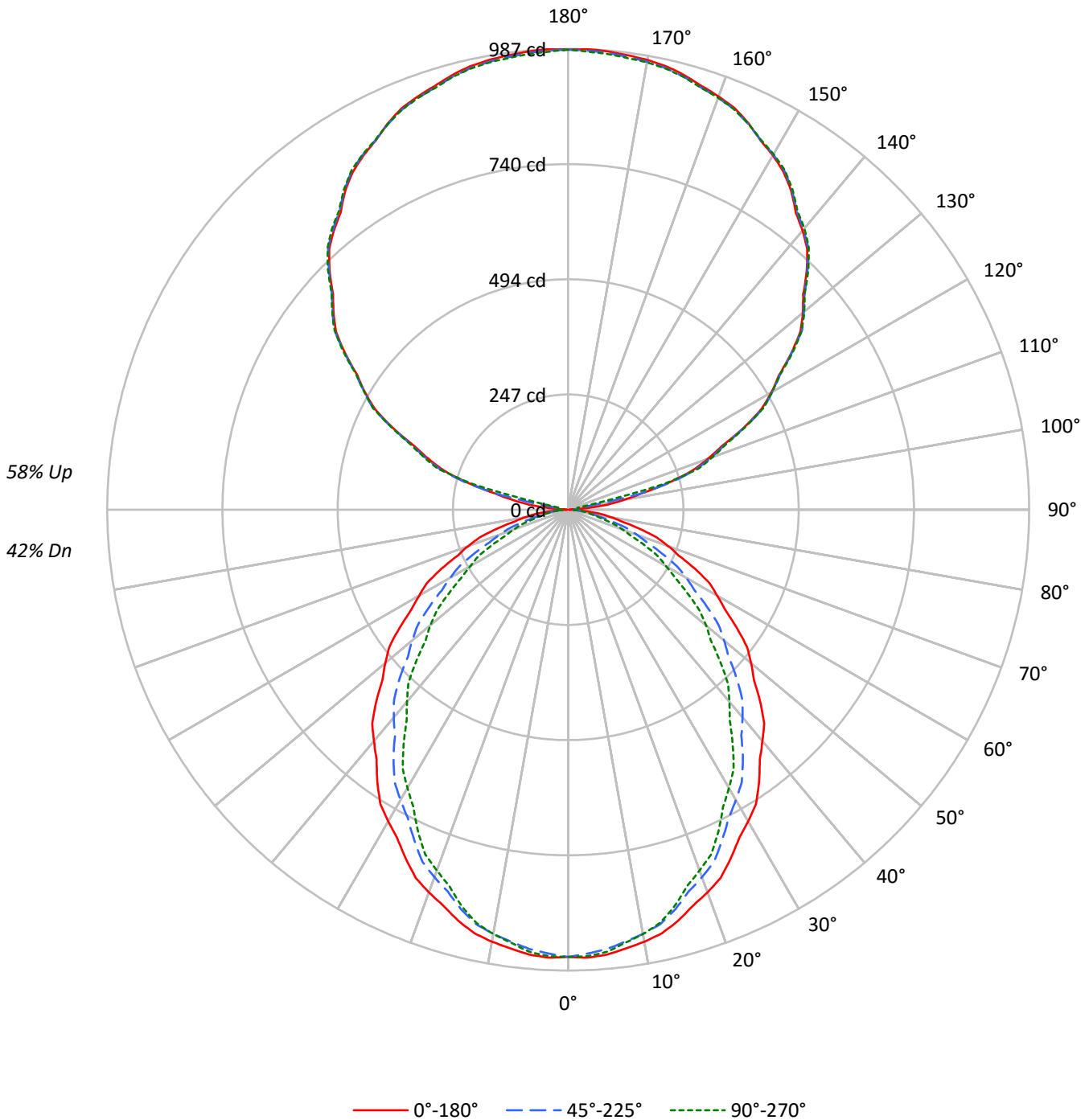
Input Watts (W): 38.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332910-830

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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	105	105	105	105	96	96	96	96	79	79	79	63	63	63	49	49	49	42
1	96	92	88	85	88	84	81	78	69	67	65	56	54	53	44	43	42	36
2	88	81	75	70	80	74	69	64	61	57	54	49	47	45	39	37	35	30
3	80	71	64	58	73	65	59	54	54	50	46	44	41	38	34	32	30	26
4	73	63	55	49	67	58	51	46	48	43	39	39	36	33	31	28	26	22
5	67	56	48	42	61	52	45	40	43	38	34	35	31	28	28	25	23	20
6	62	50	42	37	57	46	39	34	39	34	30	32	28	25	25	23	20	17
7	57	45	38	32	52	42	35	30	35	30	26	29	25	22	23	20	18	15
8	53	41	34	28	49	38	31	27	32	27	23	27	23	20	21	18	16	14
9	50	38	30	25	45	35	28	24	29	24	21	24	21	18	20	17	15	13
10	46	35	27	23	42	32	26	21	27	22	19	23	19	16	18	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7733	7733	7733
5°	7750	7656	7703
10°	7702	7564	7564
15°	7614	7405	7350
20°	7491	7196	7064
25°	7337	6951	6774
30°	7185	6693	6413
35°	7019	6427	6050
40°	6817	6122	5658
45°	6632	5819	5259
50°	6420	5471	4835
55°	6194	5111	4376
60°	5945	4713	3907
65°	5717	4216	3446
70°	5384	3670	2924
75°	4966	3044	2380
80°	4328	2320	2180
85°	3668	2103	1973



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.0	1.7
10°-20°	250.9	4.8
20°-30°	362.3	6.9
30°-40°	410.7	7.8
40°-50°	396.6	7.5
50°-60°	329.8	6.3
60°-70°	227.7	4.3
70°-80°	115.4	2.2
80°-90°	32.5	0.6
90°-100°	33.7	0.6
100°-110°	214.9	4.1
110°-120°	411.0	7.8
120°-130°	521.8	9.9
130°-140°	558.3	10.6
140°-150°	522.1	9.9
150°-160°	421.0	8.0
160°-170°	271.5	5.2
170°-180°	93.6	1.8
0°-30°	703.2	13.4
0°-40°	1113.9	21.2
0°-60°	1840.3	35.0
0°-90°	2215.9	42.1
90°-120°	659.6	12.5
90°-150°	2261.8	43.0
90°-180°	3048.0	57.9
0°-180°	5263.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	958	958	958	958	958	
5°	956	953	945	952	951	91
15°	911	904	886	884	879	257
25°	824	810	780	768	760	379
35°	712	688	652	628	614	445
45°	581	553	510	475	461	448
55°	440	410	363	326	311	394
65°	299	267	221	190	180	295
75°	159	132	98	81	76	168
85°	40	26	23	21	21	45
90°	2	10	16	20	22	4
95°	40	17	16	20	21	52
105°	222	226	230	235	210	232
115°	414	416	416	417	417	407
125°	582	585	584	586	587	520
135°	722	722	724	726	727	556
145°	833	835	835	836	837	520
155°	913	914	912	914	912	421
165°	963	960	960	965	959	272
175°	985	981	982	987	979	94
180°	985	985	985	985	985	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9
2.5°	960.3	959.7	959.2	958.7	958.2	957.2	955.7	954.3	952.8	951.4	952.8
5°	956.4	955.7	955.1	954.4	953.9	952.5	950.6	948.6	946.6	944.7	946.3
7.5°	947.7	947.1	946.4	945.7	945.0	943.4	940.8	938.3	935.8	933.2	934.2
10°	939.5	938.8	937.9	937.1	936.3	934.4	931.5	928.5	925.6	922.7	923.3
12.5°	929.0	928.0	927.1	926.1	925.2	923.0	919.5	916.1	912.7	909.2	909.6
15°	911.0	909.5	908.0	906.5	905.0	902.3	898.2	894.2	890.0	886.0	885.7
17.5°	889.1	886.9	884.9	882.7	880.6	877.1	872.2	867.3	862.4	857.5	856.7
20°	872.0	870.0	867.8	865.7	863.6	859.8	854.2	848.7	843.1	837.6	836.3
22.5°	853.3	850.9	848.6	846.1	843.8	839.6	833.7	827.7	821.8	815.9	813.9
25°	823.7	820.8	817.7	814.8	811.9	807.1	800.4	793.7	787.0	780.4	777.6
27.5°	792.6	788.9	785.2	781.6	777.8	772.4	765.3	758.2	751.0	743.9	740.5
30°	770.8	766.8	762.7	758.7	754.6	748.7	741.0	733.4	725.7	718.0	714.0
32.5°	748.0	743.4	738.8	734.1	729.6	723.3	715.4	707.5	699.6	691.6	686.9
35°	712.2	707.0	701.7	696.5	691.4	684.7	676.5	668.4	660.2	652.1	646.5
37.5°	673.9	668.5	663.2	657.8	652.3	645.2	636.1	627.1	618.1	609.1	602.9
40°	646.9	641.5	636.1	630.7	625.4	618.0	608.8	599.5	590.2	580.9	574.0
42.5°	621.0	615.5	609.8	604.2	598.5	590.9	581.2	571.5	561.8	552.1	545.2
45°	580.9	574.9	568.8	562.8	556.8	548.8	539.0	529.3	519.5	509.7	501.7
47.5°	539.4	533.2	526.9	520.7	514.4	506.2	496.1	486.0	475.8	465.6	457.3
50°	511.2	504.8	498.5	492.1	485.8	477.4	466.9	456.6	446.1	435.6	427.5
52.5°	482.5	476.3	470.0	463.8	457.5	449.1	438.4	427.7	417.0	406.3	398.0
55°	440.1	433.6	427.1	420.5	414.0	405.4	394.8	384.3	373.6	363.1	354.6
57.5°	398.1	391.3	384.6	377.8	371.0	362.4	351.9	341.5	331.1	320.7	312.1
60°	368.2	361.7	355.2	348.6	342.1	333.7	323.2	312.7	302.4	291.9	283.4
62.5°	341.2	334.4	327.6	320.8	314.1	305.4	294.6	284.0	273.2	262.6	254.8
65°	299.3	292.3	285.2	278.2	271.2	262.5	252.0	241.7	231.2	220.7	213.8
67.5°	255.7	248.9	242.2	235.5	228.8	220.6	210.9	201.2	191.6	181.9	175.9
70°	228.1	221.2	214.4	207.5	200.8	192.7	183.3	174.1	164.8	155.5	150.1
72.5°	198.8	192.6	186.3	180.2	174.0	166.5	157.8	149.0	140.2	131.4	126.9
75°	159.2	153.2	147.1	141.1	135.1	128.2	120.6	112.8	105.2	97.6	93.8
77.5°	118.9	113.9	108.8	103.6	98.5	92.8	86.6	80.5	74.3	68.1	65.9
80°	93.1	88.4	83.7	79.0	74.3	69.5	64.6	59.7	54.8	49.9	49.4
82.5°	70.9	66.5	62.2	57.9	53.5	50.0	47.1	44.3	41.6	38.7	38.4
85°	39.6	36.4	33.1	29.8	26.6	24.7	24.2	23.8	23.2	22.7	22.4
87.5°	13.9	13.3	12.5	11.9	11.2	10.9	11.0	11.2	11.3	11.5	11.5
90°	2.2	4.1	5.8	7.6	9.4	10.9	12.3	13.6	14.9	16.2	17.2
92.5°	9.3	9.4	9.5	9.6	9.7	10.4	11.7	13.0	14.3	15.6	16.6
95°	40.5	35.0	29.4	23.8	18.3	15.6	15.7	15.9	16.0	16.2	17.2
97.5°	86.1	89.5	93.0	96.5	100.0	92.6	74.3	56.0	37.7	19.4	19.5
100°	120.8	123.9	126.8	129.7	132.6	122.8	100.2	77.7	55.0	32.4	29.6
102.5°	159.8	161.9	164.1	166.3	168.4	168.1	165.0	162.1	159.2	156.3	126.2
105°	221.8	222.8	223.8	224.8	225.7	226.7	227.4	228.3	229.1	229.9	231.4
107.5°	279.5	279.9	280.4	281.0	281.4	282.2	283.3	284.5	285.6	286.7	287.4
110°	318.4	318.9	319.3	319.8	320.4	321.0	322.1	323.0	324.0	325.0	325.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	356.1	356.9	357.9	358.7	359.7	360.3	360.8	361.2	361.7	362.1	362.1
115°	414.2	414.6	415.2	415.7	416.1	416.3	416.1	415.9	415.8	415.7	415.9
117.5°	466.5	467.1	467.8	468.4	469.1	469.7	470.0	470.3	470.7	471.1	471.0
120°	501.9	502.6	503.2	503.9	504.4	504.7	504.5	504.4	504.3	504.1	504.4
122.5°	534.9	535.3	535.6	536.0	536.5	536.8	537.0	537.2	537.4	537.7	537.9
125°	582.2	582.9	583.5	584.2	584.8	584.9	584.7	584.4	584.0	583.7	584.2
127.5°	627.0	627.2	627.4	627.5	627.6	628.1	628.9	629.6	630.4	631.1	631.0
130°	655.9	656.1	656.2	656.4	656.6	656.9	657.3	657.9	658.4	658.8	659.0
132.5°	682.4	682.7	683.1	683.3	683.6	684.1	684.7	685.3	685.9	686.5	686.7
135°	722.3	722.1	721.9	721.7	721.6	721.8	722.5	723.1	723.8	724.4	724.7
137.5°	757.4	757.5	757.6	757.6	757.7	758.1	758.8	759.6	760.3	761.0	761.4
140°	780.4	780.8	781.1	781.5	781.7	782.1	782.4	782.8	783.1	783.3	783.9
142.5°	801.1	801.6	802.3	802.9	803.4	803.8	804.0	804.3	804.5	804.6	805.0
145°	832.7	833.3	833.8	834.2	834.7	835.0	835.0	835.0	835.0	835.0	835.2
147.5°	858.0	858.9	859.8	860.7	861.7	862.0	861.9	861.7	861.5	861.4	861.5
150°	876.3	876.9	877.6	878.3	878.8	879.1	878.9	878.8	878.6	878.4	878.4
152.5°	891.6	892.1	892.6	893.2	893.7	893.8	893.5	893.2	892.9	892.6	892.9
155°	913.1	913.2	913.4	913.6	913.8	913.6	913.1	912.6	912.1	911.6	912.3
157.5°	931.2	931.1	931.0	930.9	930.9	930.5	929.9	929.4	928.9	928.3	929.2
160°	941.9	941.3	940.8	940.4	939.9	939.5	939.4	939.2	939.1	938.9	939.9
162.5°	951.3	950.6	950.0	949.4	948.8	948.4	948.2	948.1	947.9	947.7	948.8
165°	963.2	962.4	961.6	960.7	960.0	959.5	959.5	959.5	959.5	959.5	960.8
167.5°	972.6	971.8	970.9	970.1	969.2	968.7	968.7	968.6	968.5	968.4	969.8
170°	978.0	976.9	976.0	975.0	974.0	973.6	973.7	973.9	974.1	974.3	975.5
172.5°	981.5	980.5	979.5	978.5	977.6	977.1	977.3	977.5	977.6	977.8	979.1
175°	985.3	984.3	983.4	982.4	981.4	981.0	981.2	981.3	981.5	981.7	983.1
177.5°	987.1	986.2	985.2	984.3	983.4	983.1	983.4	983.6	983.9	984.1	985.1
180°	985.3	985.3	985.3	985.3	985.3	985.3	985.3	985.3	985.3	985.3	985.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9
2.5°	954.3	955.7	957.2	957.8	957.7	957.5	957.4	957.3
5°	947.9	949.6	951.2	951.9	951.5	951.2	950.8	950.6
7.5°	935.3	936.3	937.5	937.6	937.2	936.6	936.1	935.6
10°	924.0	924.6	925.3	925.3	924.6	924.0	923.3	922.7
12.5°	909.9	910.3	910.8	910.5	909.6	908.7	907.8	906.8
15°	885.3	885.0	884.7	884.0	882.8	881.7	880.5	879.4
17.5°	855.7	854.8	853.8	852.5	850.8	849.1	847.3	845.6
20°	835.0	833.7	832.4	830.7	828.6	826.4	824.3	822.2
22.5°	812.0	810.0	808.0	806.3	804.5	802.8	801.1	799.3
25°	774.9	772.0	769.3	767.1	765.4	763.8	762.2	760.5
27.5°	737.0	733.6	730.2	727.3	724.9	722.6	720.3	717.9
30°	709.9	705.8	701.7	698.4	695.8	693.1	690.6	688.0
32.5°	682.2	677.5	672.7	669.1	666.7	664.2	661.7	659.2
35°	640.9	635.4	629.9	625.7	622.7	619.7	616.8	613.9
37.5°	596.6	590.5	584.3	579.8	576.7	573.8	570.9	568.0
40°	567.2	560.3	553.5	548.7	545.6	542.7	539.8	536.9
42.5°	538.2	531.2	524.2	519.2	516.1	513.1	510.0	507.0
45°	493.8	485.8	477.8	472.3	469.4	466.5	463.5	460.6
47.5°	449.0	440.7	432.4	426.7	423.5	420.3	417.1	413.8
50°	419.3	411.2	403.0	397.5	394.4	391.2	388.1	385.0
52.5°	389.7	381.4	373.2	367.5	364.2	361.0	357.8	354.6
55°	346.1	337.6	329.1	323.4	320.3	317.2	314.1	310.9
57.5°	303.4	294.8	286.3	280.8	278.4	276.1	273.7	271.4
60°	274.9	266.5	258.0	252.5	249.9	247.2	244.7	242.0
62.5°	246.9	239.1	231.3	226.3	224.2	222.2	220.1	218.0
65°	206.8	199.7	192.7	188.2	186.3	184.4	182.4	180.4
67.5°	169.8	163.8	157.8	153.7	151.6	149.4	147.2	145.1
70°	144.8	139.4	133.9	130.4	128.8	127.2	125.5	123.9
72.5°	122.2	117.6	113.0	110.0	108.5	107.0	105.5	104.0
75°	90.0	86.3	82.6	80.2	79.2	78.2	77.3	76.3
77.5°	63.7	61.5	59.3	58.1	57.8	57.5	57.2	56.9
80°	48.9	48.4	47.9	47.6	47.4	47.2	47.1	46.9
82.5°	38.0	37.6	37.3	37.0	36.9	36.7	36.6	36.4
85°	22.1	21.8	21.4	21.3	21.3	21.3	21.3	21.3
87.5°	11.6	11.7	11.7	11.9	12.1	12.3	12.4	12.6
90°	18.2	19.1	20.2	20.8	21.1	21.5	21.8	22.1
92.5°	17.6	18.6	19.5	20.1	20.2	20.2	20.3	20.4
95°	18.2	19.1	20.2	20.7	20.9	21.0	21.2	21.4
97.5°	19.7	19.8	19.9	20.0	20.2	20.3	20.5	20.6
100°	26.9	24.0	21.3	20.0	20.2	20.3	20.5	20.6
102.5°	96.1	66.2	36.1	21.1	21.1	21.1	21.2	21.2
105°	232.9	234.3	235.8	233.7	227.7	221.8	215.9	210.0
107.5°	288.1	288.8	289.5	290.2	290.9	291.4	292.1	292.8
110°	325.6	326.0	326.3	326.7	327.3	327.7	328.2	328.7



TEST NUMBER: P332910-830

CATALOG NUMBER: S124RDIP-S575D810U830-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	362.0	361.9	361.8	362.1	362.8	363.4	364.0	364.7
115°	416.3	416.6	417.0	417.2	417.2	417.2	417.2	417.2
117.5°	470.9	470.9	470.8	470.7	470.7	470.6	470.5	470.5
120°	504.7	505.1	505.4	505.4	505.1	504.7	504.4	504.1
122.5°	538.1	538.3	538.5	538.4	538.1	537.7	537.4	537.1
125°	584.7	585.1	585.6	586.0	586.2	586.3	586.4	586.6
127.5°	630.9	630.8	630.7	630.7	630.5	630.4	630.3	630.1
130°	659.2	659.3	659.5	659.6	659.6	659.6	659.6	659.6
132.5°	686.9	687.0	687.2	687.2	687.1	686.9	686.8	686.7
135°	725.1	725.4	725.8	726.0	726.4	726.7	727.1	727.4
137.5°	761.7	762.0	762.4	762.5	762.4	762.3	762.2	762.1
140°	784.4	784.9	785.3	785.7	785.9	786.0	786.2	786.4
142.5°	805.3	805.7	806.1	806.3	806.3	806.3	806.3	806.3
145°	835.3	835.5	835.7	835.8	836.2	836.5	836.9	837.2
147.5°	861.7	861.8	861.9	862.0	862.2	862.3	862.5	862.7
150°	878.4	878.4	878.4	878.5	878.7	878.8	879.0	879.2
152.5°	893.2	893.4	893.6	893.7	893.6	893.5	893.4	893.3
155°	912.9	913.6	914.3	914.4	913.8	913.3	912.9	912.4
157.5°	930.0	930.9	931.7	931.7	930.9	930.0	929.2	928.3
160°	940.8	941.9	942.8	942.8	941.9	940.8	939.9	938.9
162.5°	949.7	950.6	951.7	951.6	950.5	949.3	948.3	947.2
165°	962.1	963.5	964.8	964.7	963.2	961.8	960.3	958.8
167.5°	971.3	972.7	974.1	974.0	972.4	970.7	969.1	967.5
170°	976.9	978.2	979.5	979.3	977.7	976.1	974.4	972.8
172.5°	980.4	981.8	983.1	982.8	981.1	979.3	977.5	975.7
175°	984.6	986.1	987.5	987.3	985.3	983.4	981.4	979.4
177.5°	986.3	987.3	988.4	988.1	986.5	985.0	983.4	981.8
180°	985.3	985.3	985.3	985.3	985.3	985.3	985.3	985.3

(END OF REPORT)