

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: P334798

Luminaire Tested: **S124IP-S1035U835-4F0-1E-UDD-4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P334798
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124IP-S1035U835-4F0-1E-UDD-4
Description: DEFINE 4 INDIRECT LED LUMINAIRE, BATWING OPTIC
PENDANT MOUNT, 1035 LUMENS PER FOOT
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3702.9 lumens
Efficiency: N/A
Efficacy: 105.5 lumens/watt
Spacing Criteria (0/90/45): - / - / -
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Indirect

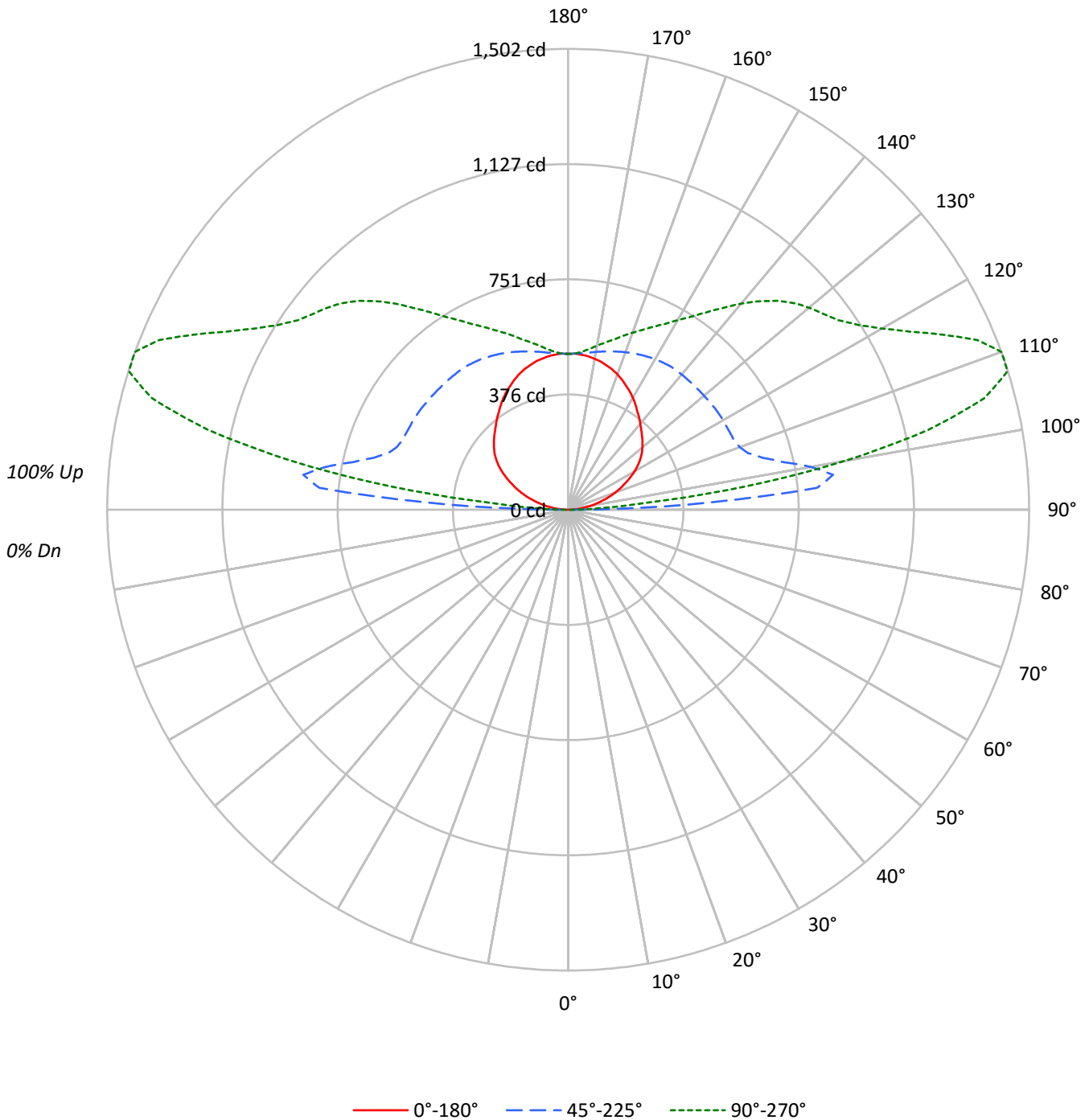
Input Watts (W): 35.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P334798

CATALOG NUMBER: S124IP-S1035U835-4F0-1E-UDD-4

Luminous Intensity Polar Plot





TEST NUMBER: P334798

CATALOG NUMBER: S124IP-S1035U835-4F0-1E-UDD-4

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	95	95	95	95	81	81	81	81	56	56	56	32	32	32	10	10	10	0
1	87	83	79	76	74	71	68	65	48	47	45	28	27	26	9	9	8	0
2	79	72	66	62	67	62	57	53	42	40	37	24	23	22	8	7	7	0
3	72	63	56	51	61	54	49	44	37	34	31	21	20	18	7	6	6	0
4	65	56	48	43	56	48	42	37	33	29	26	19	17	16	6	6	5	0
5	60	49	42	36	51	42	36	32	29	25	22	17	15	13	5	5	4	0
6	55	44	36	31	47	38	32	27	26	22	19	15	13	11	5	4	4	0
7	50	39	32	27	43	34	28	23	23	19	17	14	11	10	4	4	3	0
8	47	35	28	23	40	30	24	20	21	17	14	12	10	9	4	3	3	0
9	43	32	25	20	37	27	22	18	19	15	13	11	9	8	4	3	3	0
10	40	29	22	18	34	25	19	16	17	14	11	10	8	7	3	3	2	0

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	0	0	0
5°	0	0	0
10°	0	0	0
15°	0	0	0
20°	0	0	0
25°	0	0	0
30°	0	0	0
35°	0	0	0
40°	0	0	0
45°	0	0	0
50°	0	0	0
55°	0	0	0
60°	0	0	0
65°	0	0	0
70°	0	0	0
75°	0	0	0
80°	0	0	0
85°	0	0	0



TEST NUMBER: P334798

CATALOG NUMBER: S124IP-S1035U835-4F0-1E-UDD-4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	0.0	0.0
10°-20°	0.0	0.0
20°-30°	0.0	0.0
30°-40°	0.0	0.0
40°-50°	0.0	0.0
50°-60°	0.0	0.0
60°-70°	0.0	0.0
70°-80°	0.0	0.0
80°-90°	2.0	0.1
90°-100°	368.3	9.9
100°-110°	768.9	20.8
110°-120°	683.5	18.5
120°-130°	575.3	15.5
130°-140°	480.0	13.0
140°-150°	366.5	9.9
150°-160°	257.6	7.0
160°-170°	151.5	4.1
170°-180°	49.3	1.3
0°-30°	0.0	0.0
0°-40°	0.0	0.0
0°-60°	0.0	0.0
0°-90°	2.0	0.1
90°-120°	1820.6	49.2
90°-150°	3242.4	87.6
90°-180°	3701.0	99.9
0°-180°	3702.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	0	0	0	0	0	
5°	0	0	0	0	0	0
15°	0	0	0	0	0	0
25°	0	0	0	0	0	0
35°	0	0	0	0	0	0
45°	0	0	0	0	0	0
55°	0	0	0	0	0	0
65°	0	0	0	0	0	0
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	1	8	18	20	21	2
95°	33	104	814	403	244	36
105°	117	169	655	1410	1405	124
115°	206	258	584	1122	1349	204
125°	286	340	581	955	1076	255
135°	340	405	576	848	962	263
145°	392	449	573	715	786	246
155°	446	482	557	631	658	206
165°	486	501	534	566	574	137
175°	507	508	512	519	517	48
180°	508	508	508	508	508	



TEST NUMBER: P334798

CATALOG NUMBER: S124IP-S1035U835-4F0-1E-UDD-4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	1.0	3.0	6.0	7.0	8.0	8.0	14.0	14.0	16.0	18.0	17.0
92.5°	14.0	20.0	30.9	45.9	63.9	89.8	151.7	248.6	342.4	391.3	325.4
95°	32.9	35.9	45.9	58.9	82.9	124.8	211.6	375.4	614.0	813.6	836.6
97.5°	54.9	54.9	63.9	75.9	96.8	132.8	201.7	342.4	588.0	870.5	1049.2
100°	75.9	75.9	82.9	94.8	113.8	145.8	204.7	317.5	521.1	802.6	1058.2
102.5°	95.8	97.8	103.8	114.8	132.8	162.7	214.6	310.5	476.2	717.8	983.3
105°	116.8	119.8	124.8	136.8	154.7	183.7	231.6	314.5	454.2	654.9	889.5
107.5°	139.8	141.8	146.8	159.7	176.7	205.7	249.6	326.4	448.2	614.0	812.6
110°	162.7	164.7	169.7	181.7	199.7	226.6	270.5	340.4	450.2	595.0	757.7



TEST NUMBER: P334798

CATALOG NUMBER: S124IP-S1035U835-4F0-1E-UDD-4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	184.7	186.7	192.7	203.7	221.6	248.6	290.5	355.4	456.2	586.0	726.8
115°	205.7	208.6	215.6	225.6	244.6	271.5	311.5	371.4	464.2	584.0	709.8
117.5°	227.6	230.6	236.6	247.6	265.6	293.5	331.4	387.3	472.2	583.0	700.8
120°	249.6	251.6	258.6	269.5	286.5	314.5	352.4	404.3	481.2	583.0	693.8
122.5°	269.5	271.5	278.5	288.5	307.5	334.4	372.4	420.3	490.2	582.0	685.8
125°	286.5	290.5	296.5	307.5	326.4	354.4	390.3	436.3	499.2	581.0	676.9
127.5°	302.5	305.5	312.5	324.5	344.4	372.4	407.3	450.2	506.1	579.0	664.9
130°	315.5	319.5	327.4	342.4	361.4	390.3	424.3	463.2	514.1	578.0	653.9
132.5°	328.4	331.4	342.4	356.4	377.4	404.3	438.3	476.2	521.1	577.0	643.9
135°	340.4	344.4	354.4	371.4	392.3	418.3	451.2	487.2	528.1	576.0	633.9
137.5°	352.4	356.4	367.4	383.4	405.3	430.3	461.2	495.2	532.1	576.0	624.9
140°	365.4	368.4	379.4	396.3	417.3	441.3	471.2	503.1	537.1	575.0	618.0
142.5°	379.4	382.4	392.3	408.3	428.3	451.2	480.2	509.1	541.1	575.0	612.0
145°	392.3	395.3	405.3	419.3	438.3	460.2	486.2	513.1	542.1	573.0	605.0
147.5°	407.3	408.3	417.3	432.3	448.2	468.2	493.2	517.1	543.1	570.0	599.0
150°	421.3	422.3	430.3	442.3	457.2	476.2	498.2	520.1	543.1	567.0	592.0
152.5°	434.3	434.3	442.3	453.2	466.2	483.2	502.2	522.1	541.1	562.0	584.0
155°	446.2	447.2	453.2	463.2	474.2	489.2	506.1	523.1	539.1	557.1	576.0
157.5°	458.2	458.2	464.2	472.2	482.2	494.2	509.1	523.1	537.1	552.1	568.0
160°	469.2	469.2	473.2	480.2	488.2	499.2	511.1	523.1	534.1	546.1	559.1
162.5°	479.2	478.2	481.2	487.2	494.2	502.2	513.1	523.1	531.1	540.1	551.1
165°	486.2	486.2	488.2	493.2	498.2	504.1	513.1	521.1	527.1	534.1	542.1
167.5°	494.2	493.2	494.2	498.2	501.2	506.1	513.1	519.1	523.1	528.1	534.1
170°	499.2	498.2	499.2	502.2	504.1	507.1	512.1	517.1	519.1	522.1	526.1
172.5°	504.1	503.1	503.1	505.1	506.1	508.1	511.1	515.1	515.1	516.1	519.1
175°	507.1	506.1	506.1	507.1	508.1	508.1	510.1	513.1	512.1	512.1	514.1
177.5°	509.1	508.1	507.1	508.1	508.1	508.1	509.1	511.1	509.1	509.1	510.1
180°	508.1	508.1	508.1	508.1	508.1	508.1	508.1	508.1	508.1	508.1	508.1



TEST NUMBER: P334798

CATALOG NUMBER: S124IP-S1035U835-4F0-1E-UDD-4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	18.0	19.0	20.0	20.0	21.0	22.0	21.0	21.0
92.5°	240.6	179.7	141.8	116.8	101.8	94.8	90.8	90.8
95°	739.7	585.0	451.2	354.4	305.5	274.5	256.6	243.6
97.5°	1065.2	988.3	878.5	766.7	698.8	638.9	609.0	585.0
100°	1204.0	1223.9	1175.0	1101.1	1014.3	953.4	923.4	915.5
102.5°	1197.0	1315.8	1345.7	1325.8	1280.8	1240.9	1209.0	1203.0
105°	1118.1	1290.8	1389.6	1430.6	1432.6	1424.6	1410.6	1404.6
107.5°	1021.3	1208.0	1345.7	1429.6	1473.5	1491.5	1499.5	1500.5
110°	935.4	1108.1	1252.9	1362.7	1433.6	1475.5	1493.5	1502.5



TEST NUMBER: P334798

CATALOG NUMBER: S124IP-S1035U835-4F0-1E-UDD-4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	872.5	1020.3	1155.0	1264.9	1347.7	1400.6	1427.6	1443.6
115°	834.6	957.4	1074.2	1170.0	1248.9	1308.8	1340.7	1348.7
117.5°	812.6	916.4	1011.3	1095.1	1165.0	1216.9	1250.9	1255.9
120°	798.6	891.5	971.4	1042.2	1099.1	1143.1	1169.0	1180.0
122.5°	786.7	875.5	946.4	1006.3	1052.2	1088.2	1109.1	1120.1
125°	772.7	858.5	927.4	982.3	1022.3	1051.2	1070.2	1076.2
127.5°	756.7	839.6	908.5	960.4	1000.3	1026.3	1042.2	1048.2
130°	736.8	815.6	883.5	936.4	977.3	1002.3	1018.3	1024.3
132.5°	715.8	788.7	854.6	907.5	947.4	976.3	991.3	997.3
135°	696.8	761.7	822.6	872.5	912.5	940.4	956.4	962.4
137.5°	678.9	735.8	788.7	834.6	872.5	901.5	914.5	921.4
140°	663.9	710.8	755.7	797.6	832.6	854.6	868.5	876.5
142.5°	649.9	689.8	726.8	761.7	791.7	811.6	823.6	828.6
145°	636.9	670.9	700.8	728.8	753.7	770.7	780.7	785.7
147.5°	625.9	653.9	678.9	701.8	720.8	735.8	743.7	745.7
150°	616.0	638.9	658.9	676.9	692.8	705.8	711.8	712.8
152.5°	605.0	623.9	641.9	655.9	668.9	678.9	681.8	682.8
155°	594.0	610.0	624.9	636.9	646.9	654.9	657.9	657.9
157.5°	582.0	596.0	609.0	619.0	626.9	632.9	634.9	634.9
160°	571.0	582.0	593.0	601.0	607.0	613.0	614.0	614.0
162.5°	560.1	569.0	577.0	584.0	588.0	594.0	595.0	594.0
165°	550.1	556.1	563.0	568.0	572.0	576.0	575.0	574.0
167.5°	540.1	545.1	551.1	554.1	556.1	559.1	559.1	558.1
170°	531.1	534.1	538.1	541.1	543.1	544.1	543.1	543.1
172.5°	523.1	525.1	527.1	529.1	530.1	531.1	530.1	528.1
175°	516.1	517.1	519.1	519.1	519.1	521.1	519.1	517.1
177.5°	511.1	512.1	512.1	513.1	512.1	513.1	511.1	509.1
180°	508.1	508.1	508.1	508.1	508.1	508.1	508.1	508.1

(END OF REPORT)