

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: P332603

Luminaire Tested: **S124DIP-S795D810U835-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332603
REPORT 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: S124DIP-S795D810U835-4F0-1E-UDD-D4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 810 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6134.7 lumens
Efficiency: N/A
Efficacy: 133.7 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: General Diffuse

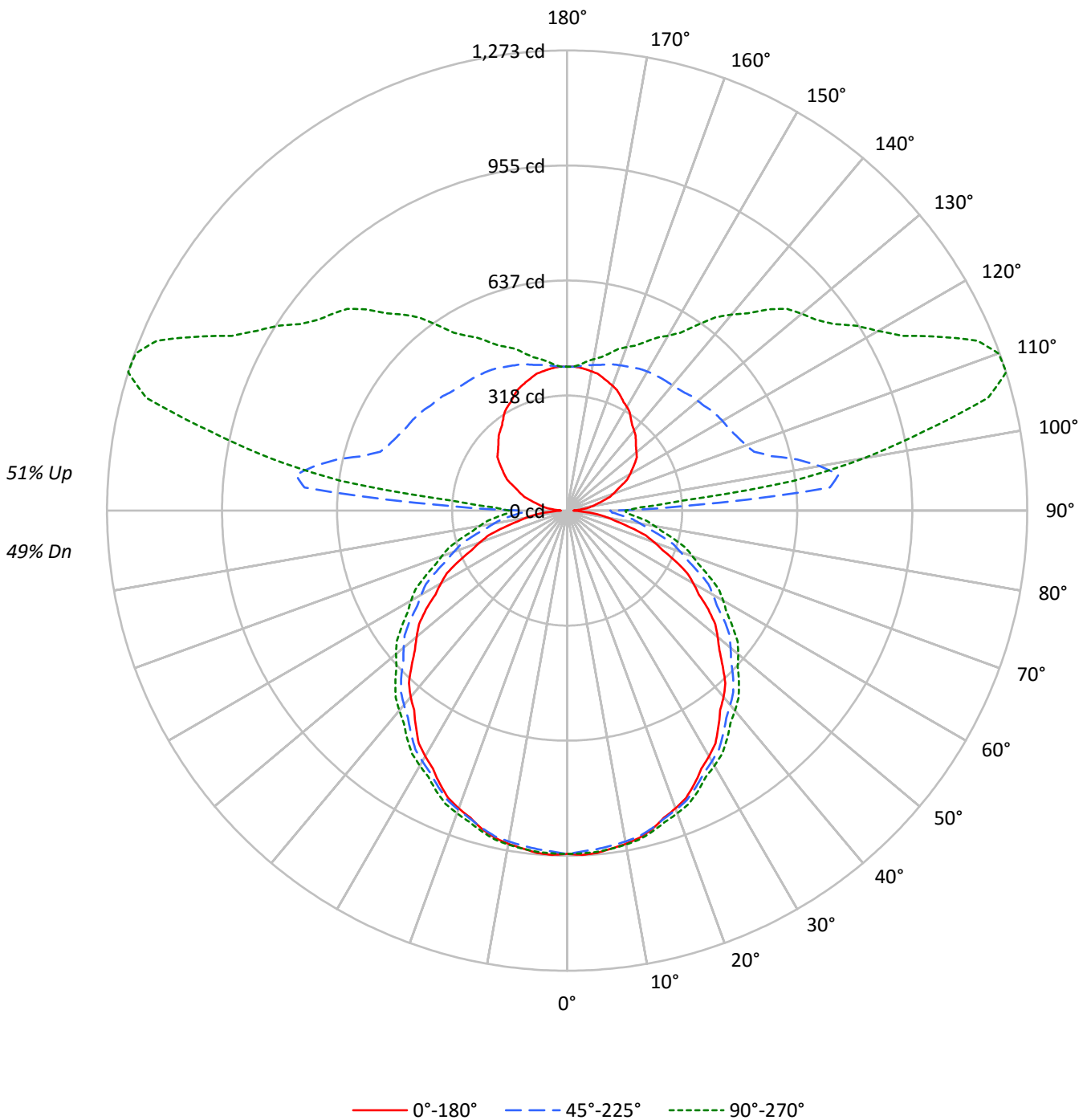
Input Watts (W): 45.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332603

CATALOG NUMBER: S124DIP-S795D810U835-4F0-1E-UDD-D4

Luminous Intensity Polar Plot





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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	107	107	107	107	98	98	98	98	83	83	83	68	68	68	55	55	55	49																				
1	97	92	88	84	89	85	81	78	71	68	66	59	57	55	47	46	45	39																				
2	87	80	73	68	80	73	68	63	62	57	54	51	48	45	41	39	37	32																				
3	80	70	62	56	73	64	57	52	54	49	45	45	41	38	36	33	31	27																				
4	73	61	53	47	66	57	49	44	48	42	38	39	35	32	32	29	26	22																				
5	66	54	46	40	61	50	43	37	43	37	32	35	31	27	29	25	23	19																				
6	61	49	40	34	56	45	38	32	38	32	28	32	27	24	26	22	20	17																				
7	56	44	36	30	52	41	33	28	35	29	25	29	24	21	23	20	17	15																				
8	52	40	32	26	48	37	30	25	31	26	22	26	22	19	22	18	16	13																				
9	49	36	29	23	45	34	27	22	29	23	19	24	20	17	20	16	14	12																				
10	45	33	26	21	42	31	24	20	26	21	17	22	18	15	18	15	13	11																				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7668	7668	7668
5°	7692	7494	7516
10°	7645	7371	7366
15°	7577	7230	7190
20°	7473	7073	7019
25°	7357	6898	6831
30°	7231	6723	6637
35°	7088	6544	6468
40°	6974	6374	6291
45°	6804	6217	6140
50°	6661	6036	5980
55°	6513	5866	5792
60°	6282	5649	5621
65°	6029	5415	5409
70°	5722	5149	5165
75°	5296	4857	4943
80°	4819	4575	4724
85°	4219	4325	4598



TEST NUMBER: P332603

CATALOG NUMBER: S124DIP-S795D810U835-4F0-1E-UDD-D4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.9	1.5
10°-20°	257.7	4.2
20°-30°	389.7	6.4
30°-40°	471.5	7.7
40°-50°	498.5	8.1
50°-60°	469.1	7.6
60°-70°	389.2	6.3
70°-80°	273.4	4.5
80°-90°	156.8	2.6
90°-100°	379.2	6.2
100°-110°	666.2	10.9
110°-120°	581.5	9.5
120°-130°	476.5	7.8
130°-140°	387.0	6.3
140°-150°	289.4	4.7
150°-160°	201.8	3.3
160°-170°	118.7	1.9
170°-180°	38.6	0.6
0°-30°	737.4	12.0
0°-40°	1208.8	19.7
0°-60°	2176.4	35.5
0°-90°	2995.8	48.8
90°-120°	1627.0	26.5
90°-150°	2779.8	45.3
90°-180°	3139.0	51.2
0°-180°	6134.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	950	950	950	950	950	
5°	951	948	940	948	948	90
15°	912	912	909	918	918	257
25°	834	840	844	855	856	384
35°	730	742	753	767	771	457
45°	608	629	649	666	672	470
55°	476	499	531	551	558	424
65°	330	364	400	426	435	327
75°	183	223	267	296	306	195
85°	56	101	149	180	192	60
90°	18	66	119	151	161	13
95°	40	131	730	436	322	40
105°	101	164	583	1200	1206	108
115°	168	219	507	951	1137	166
125°	229	271	485	797	899	204
135°	269	320	461	690	787	208
145°	308	352	449	566	626	194
155°	350	377	436	494	515	161
165°	381	393	418	443	450	107
175°	397	398	401	407	405	38
180°	398	398	398	398	398	



TEST NUMBER: P332603

CATALOG NUMBER: S124DIP-S795D810U835-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	949.9	949.9	949.9	949.9	949.9	949.9	949.9	949.9	949.9	949.9	949.9
2.5°	953.3	952.7	952.1	951.6	951.0	950.0	948.4	946.9	945.4	943.9	945.2
5°	950.9	950.2	949.5	948.8	948.1	946.9	945.2	943.6	941.9	940.3	942.2
7.5°	942.8	942.4	942.0	941.6	941.1	940.2	938.9	937.5	936.1	934.8	936.9
10°	936.0	935.8	935.6	935.3	935.1	934.4	933.2	932.0	930.8	929.6	931.8
12.5°	926.7	926.6	926.6	926.5	926.5	926.1	925.3	924.4	923.6	922.8	924.8
15°	911.6	911.8	912.0	912.3	912.5	912.3	911.6	910.9	910.1	909.4	911.6
17.5°	890.9	891.6	892.3	893.1	893.8	894.0	893.9	893.8	893.6	893.5	895.7
20°	876.5	877.2	877.9	878.6	879.3	879.8	880.0	880.2	880.5	880.7	883.1
22.5°	860.3	861.2	862.1	863.0	863.9	864.6	865.0	865.4	865.8	866.3	868.6
25°	833.9	835.3	836.8	838.2	839.6	840.7	841.4	842.1	842.8	843.5	846.1
27.5°	804.6	806.6	808.7	810.8	812.9	814.5	815.6	816.6	817.7	818.8	821.2
30°	785.0	786.9	788.8	790.7	792.6	794.3	796.0	797.6	799.3	800.9	803.5
32.5°	763.7	766.0	768.3	770.5	772.8	774.8	776.7	778.5	780.4	782.2	785.2
35°	729.7	732.5	735.4	738.2	741.0	743.6	746.0	748.4	750.7	753.1	756.4
37.5°	695.4	698.7	702.0	705.2	708.5	711.6	714.5	717.4	720.4	723.3	726.7
40°	673.3	676.4	679.4	682.5	685.6	688.8	692.1	695.4	698.7	702.0	705.6
42.5°	647.8	651.2	654.7	658.1	661.6	665.2	669.1	673.0	676.9	680.7	684.7
45°	608.4	612.9	617.4	621.9	626.4	630.9	635.4	639.9	644.3	648.8	652.9
47.5°	570.8	575.4	580.0	584.7	589.3	594.2	599.4	604.6	609.8	615.0	619.2
50°	543.5	548.7	553.9	559.1	564.3	569.5	574.7	579.9	585.1	590.3	595.1
52.5°	516.3	521.5	526.7	531.9	537.1	542.7	548.6	554.6	560.6	566.5	571.2
55°	476.5	481.5	486.5	491.4	496.4	502.4	509.5	516.6	523.7	530.8	535.5
57.5°	432.1	438.2	444.4	450.5	456.6	463.2	470.3	477.3	484.4	491.4	497.0
60°	403.1	409.3	415.4	421.6	427.7	434.7	442.5	450.3	458.1	465.9	471.3
62.5°	375.0	381.8	388.5	395.2	401.9	409.2	417.0	424.8	432.6	440.4	445.8
65°	329.7	337.3	344.9	352.4	360.0	367.8	375.8	383.9	391.9	399.9	405.8
67.5°	286.1	294.2	302.2	310.2	318.3	326.6	335.2	343.8	352.4	361.0	367.0
70°	256.3	264.4	272.4	280.5	288.5	297.0	306.0	315.0	323.9	332.9	339.3
72.5°	227.4	235.6	243.9	252.1	260.3	269.2	278.8	288.3	297.9	307.4	313.6
75°	183.0	191.7	200.4	209.2	217.9	227.3	237.2	247.1	257.1	267.0	273.6
77.5°	141.5	150.7	160.0	169.3	178.5	188.4	198.8	209.2	219.6	230.0	236.7
80°	115.9	125.4	134.8	144.3	153.8	163.7	174.1	184.5	194.9	205.3	212.4
82.5°	90.4	100.2	110.1	119.9	129.7	139.9	150.3	160.7	171.1	181.5	188.7
85°	56.4	66.3	76.2	86.2	96.1	106.4	117.0	127.6	138.3	148.9	156.0
87.5°	31.6	41.6	51.7	61.5	71.3	81.3	92.6	103.0	113.6	124.3	131.0
90°	17.8	28.8	40.6	50.9	61.1	70.9	85.8	95.9	107.7	119.4	125.5
92.5°	25.1	37.7	53.5	71.6	91.5	117.1	167.0	237.8	307.1	348.2	313.4
95°	39.6	49.8	65.4	83.4	109.9	151.5	229.2	367.2	563.7	729.8	754.2
97.5°	58.8	65.6	79.0	95.1	117.9	153.6	215.6	331.0	526.4	757.1	915.3
100°	71.1	77.3	88.9	104.4	125.4	158.1	213.5	311.1	479.8	709.5	916.1
102.5°	83.6	90.3	100.5	114.7	134.3	165.3	216.0	302.8	447.6	652.1	864.7
105°	101.1	108.1	116.8	130.9	149.7	179.1	225.4	299.0	417.2	583.1	772.8
107.5°	122.4	127.9	135.7	149.5	166.9	195.3	238.0	305.4	407.2	541.9	697.7
110°	136.0	140.8	148.1	160.7	178.1	205.0	247.7	310.7	405.0	526.7	659.5



TEST NUMBER: P332603

CATALOG NUMBER: S124DIP-S795D810U835-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	148.9	153.4	160.8	172.5	189.5	216.1	257.1	316.6	404.9	516.8	635.7
115°	167.5	171.9	179.5	189.5	206.5	232.4	271.3	325.7	406.0	507.4	611.1
117.5°	187.9	191.4	197.5	207.4	222.6	248.6	285.4	335.6	407.8	500.3	596.3
120°	200.8	203.1	209.3	218.6	232.6	258.2	294.8	342.3	409.4	496.0	587.5
122.5°	213.3	215.0	220.6	228.7	243.4	268.0	304.2	348.8	411.1	491.1	578.3
125°	228.7	231.6	236.0	244.4	259.0	283.7	317.8	359.7	414.8	484.9	564.4
127.5°	243.0	245.3	250.7	260.3	275.5	299.7	331.5	369.0	416.5	476.8	546.7
130°	250.3	253.2	259.2	270.7	285.3	309.8	340.1	374.4	418.1	471.9	535.6
132.5°	258.4	260.7	268.6	279.4	295.3	318.1	347.7	380.6	419.8	467.8	525.7
135°	268.8	271.9	279.7	293.0	309.4	330.6	358.0	387.8	421.6	460.7	509.9
137.5°	280.2	282.9	291.3	303.7	320.5	340.2	365.1	392.2	421.4	455.7	496.5
140°	288.3	290.4	298.8	311.8	328.0	346.8	370.5	395.7	422.6	452.5	489.2
142.5°	296.2	298.5	306.4	319.1	334.8	352.9	375.5	398.6	423.7	450.8	483.4
145°	308.4	310.5	318.1	328.8	343.4	360.5	380.8	401.9	424.6	448.8	475.3
147.5°	322.3	322.8	329.5	340.5	352.6	368.0	387.1	405.5	425.4	446.0	468.2
150°	331.0	331.6	337.6	346.7	358.2	373.0	390.2	407.4	425.4	444.1	463.7
152.5°	338.3	338.4	344.6	353.3	363.8	377.4	392.7	408.6	424.1	441.0	458.7
155°	349.5	350.3	355.0	362.8	371.4	383.1	396.4	409.7	422.2	436.3	451.2
157.5°	360.6	360.6	365.0	371.1	378.6	387.8	399.1	409.7	420.2	431.5	443.5
160°	367.5	367.5	370.6	376.1	382.4	391.0	400.3	409.7	418.3	427.7	437.9
162.5°	373.8	373.1	375.6	380.5	386.1	392.8	401.6	409.7	416.5	424.0	432.9
165°	380.8	380.8	382.4	386.3	390.2	394.9	401.9	408.2	412.9	418.3	424.6
167.5°	387.8	387.1	387.8	390.8	393.0	396.6	401.8	406.3	409.1	412.7	417.1
170°	391.0	390.2	391.0	393.3	394.9	397.2	401.1	405.0	406.6	408.9	412.1
172.5°	394.1	393.3	393.5	395.2	396.1	397.8	400.5	403.8	404.1	405.2	407.7
175°	397.2	396.4	396.4	397.2	398.0	398.0	399.6	401.9	401.1	401.1	402.7
177.5°	398.6	398.0	397.4	398.0	398.0	398.0	398.6	399.9	398.6	398.6	399.2
180°	398.0	398.0	398.0	398.0	398.0	398.0	398.0	398.0	398.0	398.0	398.0



TEST NUMBER: P332603

CATALOG NUMBER: S124DIP-S795D810U835-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	949.9	949.9	949.9	949.9	949.9	949.9	949.9	949.9
2.5°	946.5	947.9	949.2	949.8	949.6	949.4	949.2	949.0
5°	944.1	946.0	947.8	948.7	948.4	948.2	948.0	947.7
7.5°	939.0	941.1	943.3	944.2	944.0	943.7	943.5	943.3
10°	933.9	936.0	938.2	939.1	938.9	938.6	938.4	938.2
12.5°	926.7	928.7	930.6	931.5	931.5	931.4	931.4	931.3
15°	913.7	915.8	917.9	918.9	918.7	918.4	918.2	917.9
17.5°	897.8	900.0	902.2	903.2	903.0	902.8	902.6	902.4
20°	885.4	887.8	890.2	891.4	891.4	891.4	891.4	891.4
22.5°	871.0	873.3	875.7	877.1	877.5	877.8	878.2	878.6
25°	848.7	851.3	853.9	855.3	855.5	855.8	856.0	856.3
27.5°	823.6	826.0	828.5	829.8	830.1	830.4	830.7	830.9
30°	806.1	808.7	811.3	812.9	813.4	813.8	814.3	814.8
32.5°	788.2	791.2	794.1	795.9	796.3	796.8	797.3	797.8
35°	759.7	763.0	766.3	768.3	769.0	769.7	770.5	771.2
37.5°	730.0	733.4	736.7	738.8	739.5	740.3	741.0	741.8
40°	709.1	712.7	716.2	718.4	719.4	720.3	721.3	722.2
42.5°	688.6	692.5	696.4	698.8	699.5	700.3	701.1	701.8
45°	656.9	660.9	664.9	667.5	668.7	669.9	671.1	672.2
47.5°	623.3	627.5	631.7	634.4	635.9	637.3	638.7	640.1
50°	599.8	604.5	609.2	612.3	613.7	615.2	616.6	618.0
52.5°	576.0	580.7	585.4	588.5	589.9	591.3	592.7	594.2
55°	540.2	545.0	549.7	552.8	554.2	555.6	557.0	558.4
57.5°	502.7	508.3	513.9	517.4	518.7	520.0	521.4	522.7
60°	476.8	482.2	487.6	491.3	493.2	495.1	497.0	498.9
62.5°	451.2	456.7	462.1	465.8	467.7	469.6	471.4	473.3
65°	411.8	417.7	423.6	427.5	429.4	431.3	433.1	435.0
67.5°	373.0	379.0	385.0	388.9	390.8	392.6	394.5	396.3
70°	345.7	352.1	358.5	362.5	364.1	365.8	367.4	369.1
72.5°	319.8	326.0	332.2	336.2	338.0	339.9	341.7	343.6
75°	280.2	286.8	293.5	297.8	300.0	302.1	304.2	306.3
77.5°	243.4	250.1	256.8	261.3	263.6	265.8	268.1	270.4
80°	219.5	226.6	233.7	238.1	240.0	241.9	243.8	245.7
82.5°	196.0	203.3	210.6	215.3	217.3	219.4	221.5	223.6
85°	163.1	170.2	177.3	182.0	184.4	186.7	189.1	191.5
87.5°	138.0	145.0	152.0	156.5	158.7	161.0	162.9	165.0
90°	133.1	140.7	148.4	152.7	155.4	158.1	159.2	161.1
92.5°	267.1	235.8	218.8	207.5	200.1	197.8	197.0	198.9
95°	684.7	569.9	471.5	399.9	363.7	341.6	329.7	321.6
97.5°	954.4	915.5	845.3	767.7	713.6	668.6	647.2	632.9
100°	1036.6	1058.6	1026.7	972.8	906.5	860.4	838.6	834.0
102.5°	1027.6	1111.3	1128.6	1108.6	1068.7	1036.0	1013.1	1009.9
105°	957.8	1099.0	1182.3	1218.2	1221.7	1217.3	1208.3	1205.5
107.5°	862.1	1012.0	1126.8	1200.3	1240.6	1260.1	1269.7	1273.4
110°	804.2	944.9	1063.7	1153.4	1210.8	1245.5	1261.5	1270.4



TEST NUMBER: P332603

CATALOG NUMBER: S124DIP-S795D810U835-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	760.1	885.0	997.4	1087.0	1151.9	1193.5	1215.1	1228.4
115°	714.1	815.5	912.1	990.6	1054.1	1102.6	1129.3	1137.2
117.5°	687.7	772.3	849.1	916.2	970.8	1012.1	1039.3	1046.0
120°	674.3	751.8	819.1	877.9	924.4	960.7	982.9	993.4
122.5°	662.6	737.5	799.2	851.0	890.4	921.5	940.4	950.7
125°	644.0	715.7	774.2	820.1	852.8	876.9	893.2	899.3
127.5°	621.5	690.0	748.1	791.8	824.8	846.6	860.7	867.0
130°	604.7	670.7	728.2	772.4	805.9	826.9	840.8	846.9
132.5°	587.8	649.9	705.9	750.0	782.9	806.4	819.7	825.8
135°	562.9	617.5	669.0	710.7	743.4	766.7	780.6	786.7
137.5°	540.9	587.4	631.0	668.7	699.1	721.9	733.4	740.2
140°	528.3	568.1	606.3	641.3	669.9	688.2	700.4	707.8
142.5°	517.0	552.1	585.0	615.3	640.5	657.5	668.1	673.5
145°	501.7	529.7	554.6	577.7	598.2	612.4	621.2	626.0
147.5°	489.1	510.4	529.3	547.0	562.2	574.3	581.0	583.2
150°	482.4	500.4	516.1	530.1	542.7	552.8	557.5	558.3
152.5°	475.6	491.0	505.4	517.0	527.6	535.9	538.7	539.5
155°	465.2	477.8	489.5	498.9	506.7	512.9	515.3	515.3
157.5°	454.1	464.6	474.5	482.0	487.9	492.6	494.0	494.0
160°	447.3	455.9	464.5	470.7	475.4	480.1	480.9	480.9
162.5°	440.4	447.7	454.5	460.1	463.5	468.2	469.0	468.4
165°	430.8	435.5	441.0	444.9	448.0	451.2	450.4	449.6
167.5°	421.6	425.2	429.6	431.9	433.5	435.5	435.4	434.7
170°	416.0	418.3	421.5	423.8	425.4	426.1	425.4	425.4
172.5°	411.0	412.7	414.6	416.3	417.2	418.0	417.2	416.0
175°	404.3	405.0	406.6	406.6	406.6	408.2	406.6	405.0
177.5°	399.9	400.5	400.5	401.1	400.5	401.1	399.9	398.6
180°	398.0	398.0	398.0	398.0	398.0	398.0	398.0	398.0

(END OF REPORT)