

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: P332588-940

Luminaire Tested: **S124DIP-S795D365U940-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332588-940
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-S795D365U940-4F0-1E-UDD-F4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4205.1 lumens
Efficiency: N/A
Efficacy: 120.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Semi-Direct

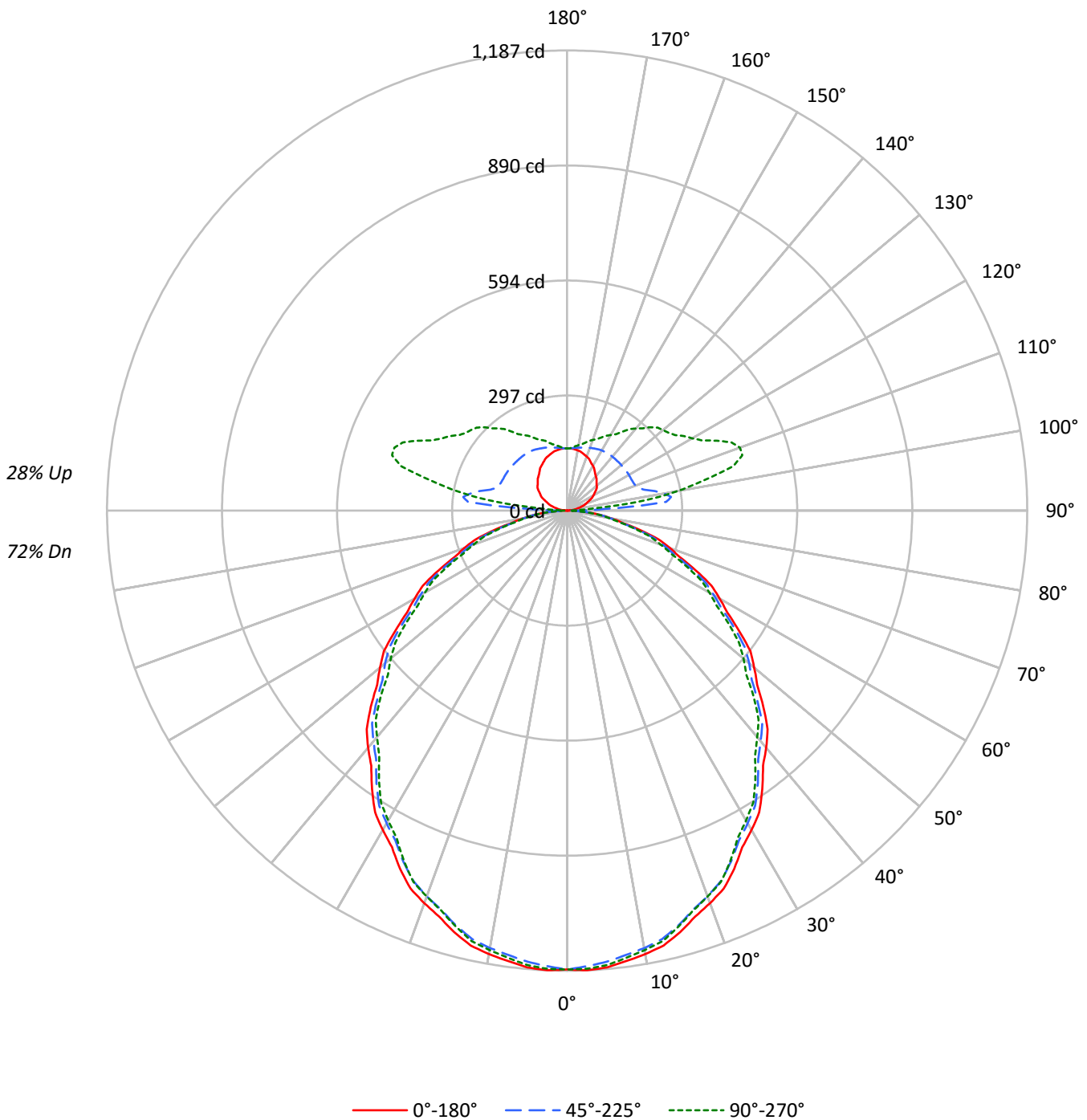
Input Watts (W): 35
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332588-940

CATALOG NUMBER: S124DIP-S795D365U940-4F0-1E-UDD-F4

Luminous Intensity Polar Plot





TEST NUMBER: P332588-940

CATALOG NUMBER: S124DIP-S795D365U940-4F0-1E-UDD-F4

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	112	112	112	112	107	107	107	107	96	96	96	86	86	86	77	77	77	72
1	103	98	94	91	97	93	90	86	84	81	79	75	73	71	68	66	65	61
2	94	86	79	74	88	82	76	71	74	69	65	66	63	60	60	57	54	51
3	85	75	68	62	81	72	65	59	65	59	55	59	54	51	53	49	46	43
4	78	67	59	52	74	64	56	50	58	52	47	52	47	43	47	43	40	37
5	72	60	51	45	68	57	49	44	52	45	41	47	42	38	43	38	35	32
6	66	54	45	39	63	51	44	38	47	40	36	43	37	33	39	34	31	28
7	61	49	40	35	58	47	39	34	43	36	31	39	33	29	35	31	27	25
8	57	44	36	31	54	42	35	30	39	33	28	36	30	26	32	28	25	22
9	53	41	33	28	51	39	32	27	36	30	25	33	28	24	30	25	22	20
10	50	37	30	25	47	36	29	24	33	27	23	30	25	22	28	23	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9556	9556	9556
5°	9585	9469	9539
10°	9525	9393	9439
15°	9410	9260	9283
20°	9257	9094	9101
25°	9082	8905	8879
30°	8869	8682	8603
35°	8647	8451	8339
40°	8416	8186	8037
45°	8176	7927	7775
50°	7910	7695	7458
55°	7623	7396	7156
60°	7335	7061	6846
65°	7011	6739	6468
70°	6649	6314	6069
75°	6095	5798	5652
80°	5421	5202	5072
85°	4742	4566	4474



TEST NUMBER: P332588-940

CATALOG NUMBER: S124DIP-S795D365U940-4F0-1E-UDD-F4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.5	2.7
10°-20°	314.1	7.5
20°-30°	462.3	11.0
30°-40°	537.4	12.8
40°-50°	537.5	12.8
50°-60°	470.1	11.2
60°-70°	349.1	8.3
70°-80°	198.4	4.7
80°-90°	58.1	1.4
90°-100°	115.9	2.8
100°-110°	241.1	5.7
110°-120°	216.0	5.1
120°-130°	181.7	4.3
130°-140°	151.5	3.6
140°-150°	115.7	2.8
150°-160°	81.3	1.9
160°-170°	47.8	1.1
170°-180°	15.6	0.4
0°-30°	887.8	21.1
0°-40°	1425.3	33.9
0°-60°	2432.8	57.9
0°-90°	3038.5	72.3
90°-120°	573.0	13.6
90°-150°	1021.9	24.3
90°-180°	1167.0	27.8
0°-180°	4205.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1184	1184	1184	1184	1184	
5°	1183	1179	1168	1178	1177	112
15°	1126	1122	1108	1113	1111	317
25°	1020	1013	1000	1000	997	469
35°	877	870	858	851	846	548
45°	716	709	694	684	681	552
55°	542	538	526	514	508	485
65°	367	362	353	344	339	363
75°	195	191	186	182	181	208
85°	51	51	49	49	48	56
90°	0	2	6	6	7	3
95°	10	33	257	127	77	12
105°	37	53	207	445	443	39
115°	65	81	184	354	426	64
125°	90	108	183	301	340	80
135°	108	128	182	268	304	83
145°	124	142	181	226	248	78
155°	141	152	176	199	208	65
165°	154	158	169	178	181	43
175°	160	160	162	164	163	15
180°	160	160	160	160	160	



TEST NUMBER: P332588-940

CATALOG NUMBER: S124DIP-S795D365U940-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1183.7	1183.7	1183.7	1183.7	1183.7	1183.7	1183.7	1183.7	1183.7	1183.7	1183.7
2.5°	1186.8	1186.2	1185.7	1185.3	1184.7	1183.6	1181.7	1179.8	1177.9	1176.2	1177.8
5°	1182.8	1182.0	1181.1	1180.3	1179.4	1177.8	1175.5	1173.1	1170.8	1168.5	1170.8
7.5°	1171.8	1170.9	1170.1	1169.2	1168.4	1166.7	1164.1	1161.5	1159.0	1156.4	1158.2
10°	1161.9	1161.1	1160.2	1159.4	1158.5	1156.7	1154.0	1151.3	1148.5	1145.8	1147.5
12.5°	1149.0	1148.2	1147.3	1146.5	1145.7	1143.7	1140.9	1137.9	1135.1	1132.1	1134.0
15°	1125.9	1125.0	1124.2	1123.3	1122.5	1120.5	1117.3	1114.2	1111.0	1107.9	1109.1
17.5°	1098.0	1096.9	1095.8	1094.8	1093.8	1091.7	1088.8	1085.7	1082.7	1079.8	1080.6
20°	1077.5	1076.4	1075.4	1074.3	1073.3	1071.1	1068.0	1064.8	1061.7	1058.5	1059.2
22.5°	1055.5	1054.1	1052.7	1051.3	1049.9	1047.7	1044.5	1041.3	1038.1	1035.0	1036.2
25°	1019.6	1018.2	1016.6	1015.2	1013.7	1011.5	1008.5	1005.6	1002.6	999.7	999.9
27.5°	978.7	977.1	975.6	974.1	972.6	970.4	967.7	965.0	962.2	959.5	958.9
30°	951.4	949.7	948.0	946.3	944.6	942.4	939.6	936.9	934.2	931.4	930.6
32.5°	922.5	921.0	919.4	917.9	916.4	914.2	911.3	908.4	905.5	902.6	901.6
35°	877.4	875.8	874.4	872.9	871.5	869.2	866.3	863.4	860.4	857.5	856.0
37.5°	829.7	828.4	827.1	825.7	824.3	822.1	818.9	815.7	812.6	809.4	807.8
40°	798.6	796.9	795.2	793.5	791.8	789.4	786.3	783.1	780.0	776.8	774.7
42.5°	765.3	764.2	763.2	762.2	761.2	758.9	755.5	752.0	748.4	744.9	742.5
45°	716.1	714.6	713.2	711.7	710.2	707.8	704.5	701.1	697.7	694.3	692.0
47.5°	664.7	663.7	662.7	661.6	660.7	658.6	655.5	652.4	649.3	646.1	643.5
50°	629.8	628.9	628.1	627.2	626.4	624.6	621.6	618.7	615.6	612.7	609.8
52.5°	595.7	594.7	593.6	592.6	591.6	589.5	586.4	583.3	580.1	577.0	574.4
55°	541.6	540.9	540.3	539.7	539.0	537.3	534.3	531.4	528.4	525.5	522.9
57.5°	490.0	489.3	488.6	487.9	487.1	485.3	482.4	479.5	476.6	473.7	471.3
60°	454.3	453.3	452.2	451.2	450.1	448.2	445.5	442.7	440.0	437.3	435.3
62.5°	419.5	418.6	417.7	416.8	415.9	414.0	411.1	408.1	405.3	402.3	400.6
65°	367.0	366.0	365.0	363.9	362.8	361.2	359.2	357.0	354.9	352.8	350.7
67.5°	314.3	313.3	312.4	311.4	310.5	309.0	306.9	304.9	302.9	300.9	298.8
70°	281.7	280.3	278.7	277.2	275.8	274.2	272.5	270.8	269.1	267.5	265.8
72.5°	246.8	245.3	243.9	242.4	240.9	239.5	238.2	236.7	235.4	234.1	232.7
75°	195.4	194.3	193.3	192.3	191.2	190.1	189.0	188.0	187.0	185.9	185.0
77.5°	146.2	145.8	145.3	144.9	144.4	143.7	142.8	141.9	140.9	140.0	139.7
80°	116.6	116.0	115.4	114.8	114.1	113.6	113.2	112.8	112.4	111.9	111.5
82.5°	87.8	87.6	87.2	86.9	86.7	86.5	86.4	86.3	86.2	86.1	85.9
85°	51.2	51.2	51.2	51.2	51.2	51.0	50.6	50.2	49.8	49.3	49.3
87.5°	19.8	19.7	19.8	19.7	19.5	19.4	19.6	19.4	19.4	19.4	19.3
90°	0.4	1.0	1.9	2.2	2.5	2.5	4.4	4.4	5.1	5.7	5.4
92.5°	3.6	5.3	8.2	12.0	16.7	23.2	39.2	63.7	87.5	100.0	83.3
95°	10.4	11.3	14.5	18.6	26.1	39.4	66.8	118.5	193.9	256.8	264.1
97.5°	18.6	18.6	21.4	25.1	31.7	42.7	63.8	106.6	181.4	270.5	331.8
100°	24.0	24.0	26.1	30.0	35.9	46.0	64.6	100.2	164.5	253.4	334.0
102.5°	29.0	29.5	31.5	35.0	40.8	50.3	67.1	98.4	153.2	231.9	315.1
105°	36.9	37.8	39.4	43.2	48.9	58.0	73.1	99.2	143.4	206.7	280.8
107.5°	45.6	46.2	47.8	51.8	57.2	66.3	80.1	104.0	141.6	192.6	253.1
110°	51.4	52.0	53.6	57.3	63.0	71.5	85.4	107.5	142.1	187.8	239.2



TEST NUMBER: P332588-940

CATALOG NUMBER: S124DIP-S795D365U940-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	56.9	57.5	59.4	62.9	68.6	77.0	90.4	111.3	143.7	185.6	231.4
115°	64.9	65.9	68.0	71.2	77.2	85.7	98.4	117.3	146.5	184.4	224.1
117.5°	73.2	74.1	76.1	79.5	85.2	94.0	105.9	123.3	149.6	184.0	220.8
120°	78.8	79.5	81.6	85.1	90.4	99.2	111.3	127.6	151.9	184.0	219.0
122.5°	83.8	84.4	86.7	89.9	95.8	104.3	116.3	131.7	154.2	183.8	217.0
125°	90.4	91.7	93.6	97.1	103.1	111.9	123.2	137.7	157.6	183.4	213.7
127.5°	96.3	97.3	99.6	103.5	109.8	118.7	129.7	142.9	160.3	182.7	209.2
130°	99.6	100.9	103.3	108.1	114.0	123.2	133.9	146.2	162.3	182.4	206.4
132.5°	102.9	103.9	107.2	111.6	118.2	126.7	137.5	149.5	164.1	182.3	203.9
135°	107.5	108.7	111.9	117.3	123.9	132.1	142.4	153.8	166.7	181.8	200.1
137.5°	112.1	113.2	116.7	121.8	128.7	136.5	146.2	156.9	168.3	181.8	196.9
140°	115.4	116.3	119.8	125.1	131.7	139.3	148.7	158.8	169.5	181.6	195.1
142.5°	118.9	119.8	123.1	128.1	134.5	141.8	151.1	160.3	170.6	181.6	193.6
145°	123.9	124.8	128.0	132.3	138.4	145.3	153.5	162.0	171.1	180.9	191.0
147.5°	129.5	129.7	132.6	137.1	142.0	148.3	156.0	163.5	171.5	179.8	188.7
150°	133.0	133.3	135.8	139.6	144.4	150.3	157.3	164.2	171.5	179.0	186.9
152.5°	136.3	136.3	138.8	142.4	146.6	152.1	158.3	164.7	170.9	177.7	184.9
155°	140.9	141.2	143.1	146.2	149.7	154.4	159.8	165.1	170.2	175.8	181.8
157.5°	145.3	145.3	147.1	149.5	152.6	156.3	160.9	165.1	169.3	173.9	178.8
160°	148.1	148.1	149.4	151.6	154.1	157.6	161.4	165.1	168.6	172.4	176.5
162.5°	150.6	150.4	151.4	153.4	155.6	158.4	161.8	165.1	167.8	170.9	174.5
165°	153.5	153.5	154.1	155.7	157.3	159.2	162.0	164.5	166.4	168.6	171.1
167.5°	156.3	156.0	156.3	157.5	158.4	159.9	161.9	163.7	164.9	166.3	168.1
170°	157.6	157.3	157.6	158.5	159.2	160.1	161.7	163.3	163.9	164.8	166.1
172.5°	158.8	158.5	158.5	159.3	159.6	160.3	161.4	162.7	162.9	163.3	164.3
175°	160.1	159.8	159.8	160.1	160.4	160.4	161.0	162.0	161.7	161.7	162.3
177.5°	160.7	160.4	160.2	160.4	160.4	160.4	160.7	161.1	160.7	160.7	161.0
180°	160.4	160.4	160.4	160.4	160.4	160.4	160.4	160.4	160.4	160.4	160.4



TEST NUMBER: P332588-940

CATALOG NUMBER: S124DIP-S795D365U940-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1183.7	1183.7	1183.7	1183.7	1183.7	1183.7	1183.7	1183.7
2.5°	1179.5	1181.2	1182.9	1183.7	1183.5	1183.3	1183.1	1182.9
5°	1173.1	1175.5	1177.8	1178.8	1178.3	1177.9	1177.5	1177.1
7.5°	1160.1	1162.0	1163.8	1164.6	1164.4	1164.1	1163.9	1163.6
10°	1149.1	1150.8	1152.5	1153.2	1152.7	1152.3	1151.9	1151.5
12.5°	1135.9	1137.6	1139.5	1140.1	1139.6	1139.0	1138.4	1137.8
15°	1110.4	1111.6	1112.9	1113.2	1112.6	1112.0	1111.3	1110.7
17.5°	1081.4	1082.2	1083.0	1083.2	1082.7	1082.3	1081.9	1081.5
20°	1059.8	1060.4	1061.0	1061.1	1060.7	1060.3	1059.9	1059.4
22.5°	1037.2	1038.4	1039.6	1039.7	1038.9	1038.2	1037.4	1036.7
25°	1000.1	1000.3	1000.6	1000.2	999.4	998.5	997.7	996.8
27.5°	958.5	958.0	957.4	956.7	955.6	954.6	953.5	952.4
30°	929.7	928.9	928.0	927.1	926.0	925.0	923.9	922.9
32.5°	900.5	899.6	898.6	897.5	896.4	895.4	894.3	893.3
35°	854.5	853.0	851.5	850.2	849.2	848.2	847.1	846.1
37.5°	806.2	804.6	803.1	801.6	800.1	798.8	797.4	795.9
40°	772.6	770.5	768.4	766.8	765.7	764.7	763.7	762.6
42.5°	740.0	737.6	735.1	733.6	732.9	732.2	731.5	730.8
45°	689.6	687.3	685.0	683.6	682.9	682.2	681.6	681.0
47.5°	640.9	638.3	635.6	633.6	632.0	630.4	628.7	627.1
50°	606.8	603.9	600.9	598.8	597.5	596.3	595.0	593.8
52.5°	571.9	569.2	566.6	564.5	562.9	561.3	559.7	558.1
55°	520.4	517.9	515.3	513.4	512.2	511.0	509.6	508.4
57.5°	468.9	466.5	464.0	462.3	461.0	459.8	458.6	457.4
60°	433.5	431.6	429.6	428.2	427.1	426.1	425.0	424.0
62.5°	398.9	397.2	395.5	394.0	393.0	391.9	390.9	389.9
65°	348.7	346.5	344.4	342.9	341.8	340.7	339.7	338.6
67.5°	296.9	294.8	292.7	291.6	291.3	291.1	290.7	290.4
70°	264.1	262.4	260.7	259.6	259.0	258.3	257.7	257.1
72.5°	231.4	230.1	228.7	227.7	227.0	226.4	225.8	225.2
75°	184.2	183.3	182.5	182.0	181.8	181.6	181.4	181.2
77.5°	139.5	139.2	139.0	138.6	138.0	137.5	137.0	136.4
80°	111.1	110.7	110.2	109.9	109.7	109.5	109.3	109.1
82.5°	85.6	85.3	85.1	84.9	84.7	84.4	84.3	84.0
85°	49.3	49.3	49.3	49.2	49.0	48.8	48.6	48.3
87.5°	19.4	19.4	19.4	19.4	19.5	19.6	19.5	19.5
90°	5.7	6.0	6.3	6.3	6.6	7.0	6.6	6.6
92.5°	61.9	46.5	37.1	30.8	27.0	25.3	24.3	24.3
95°	233.5	184.7	142.4	111.9	96.4	86.7	81.0	76.9
97.5°	345.0	326.9	296.0	263.1	240.5	221.6	212.1	205.5
100°	380.0	386.4	371.0	347.6	320.2	301.0	291.5	289.0
102.5°	378.4	409.6	414.0	404.3	387.5	373.6	363.6	361.6
105°	352.9	407.5	438.7	451.7	452.3	449.7	445.3	443.4
107.5°	317.0	375.1	418.9	447.1	462.6	469.8	473.0	473.8
110°	295.3	349.8	395.6	430.2	452.5	465.8	471.4	474.3



TEST NUMBER: P332588-940

CATALOG NUMBER: S124DIP-S795D365U940-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	279.4	327.6	370.8	405.5	430.9	446.9	454.9	459.4
115°	263.5	302.2	339.1	369.3	394.2	413.1	423.3	425.8
117.5°	255.7	287.8	316.7	342.4	363.6	379.5	389.7	391.6
120°	252.1	281.4	306.7	329.0	347.0	360.9	369.1	372.6
122.5°	249.1	277.4	300.3	319.9	335.1	347.0	353.9	357.4
125°	244.0	271.0	292.7	310.1	322.7	331.9	337.9	339.7
127.5°	237.6	263.5	285.3	301.7	314.3	322.4	327.5	329.4
130°	232.6	257.5	278.9	295.6	308.5	316.4	321.5	323.3
132.5°	227.3	250.7	271.6	288.3	301.0	309.9	314.7	316.6
135°	220.0	240.5	259.7	275.4	288.0	296.9	301.9	303.8
137.5°	213.4	230.7	246.9	261.1	273.0	281.6	285.8	288.0
140°	209.6	224.4	238.5	251.8	262.9	269.7	274.2	276.7
142.5°	206.1	219.1	231.2	242.7	252.5	259.0	262.9	264.6
145°	201.1	211.8	221.2	230.1	237.9	243.3	246.5	248.0
147.5°	197.0	205.5	213.0	220.0	225.8	230.4	232.7	233.4
150°	194.5	201.7	208.0	213.7	218.7	222.8	224.7	225.0
152.5°	191.7	198.0	203.8	208.4	212.7	216.0	217.1	217.5
155°	187.5	192.5	197.2	201.1	204.2	206.7	207.7	207.7
157.5°	183.1	187.3	191.3	194.3	196.6	198.6	199.1	199.1
160°	180.3	183.7	187.2	189.8	191.6	193.5	193.9	193.9
162.5°	177.5	180.5	183.2	185.5	186.8	188.7	189.0	188.8
165°	173.6	175.6	177.7	179.3	180.6	181.8	181.6	181.2
167.5°	170.0	171.4	173.2	174.1	174.7	175.6	175.5	175.2
170°	167.6	168.6	169.9	170.9	171.5	171.7	171.5	171.5
172.5°	165.7	166.3	167.1	167.8	168.2	168.4	168.2	167.6
175°	162.9	163.3	163.9	163.9	163.9	164.5	163.9	163.3
177.5°	161.1	161.4	161.4	161.7	161.4	161.7	161.1	160.7
180°	160.4	160.4	160.4	160.4	160.4	160.4	160.4	160.4

(END OF REPORT)