

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: P332628

Luminaire Tested: **S124DIP-S1020D365U835-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332628
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: S124DIP-S1020D365U835-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1020 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5671.8 lumens
Efficiency: N/A
Efficacy: 130.4 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: Semi-Direct

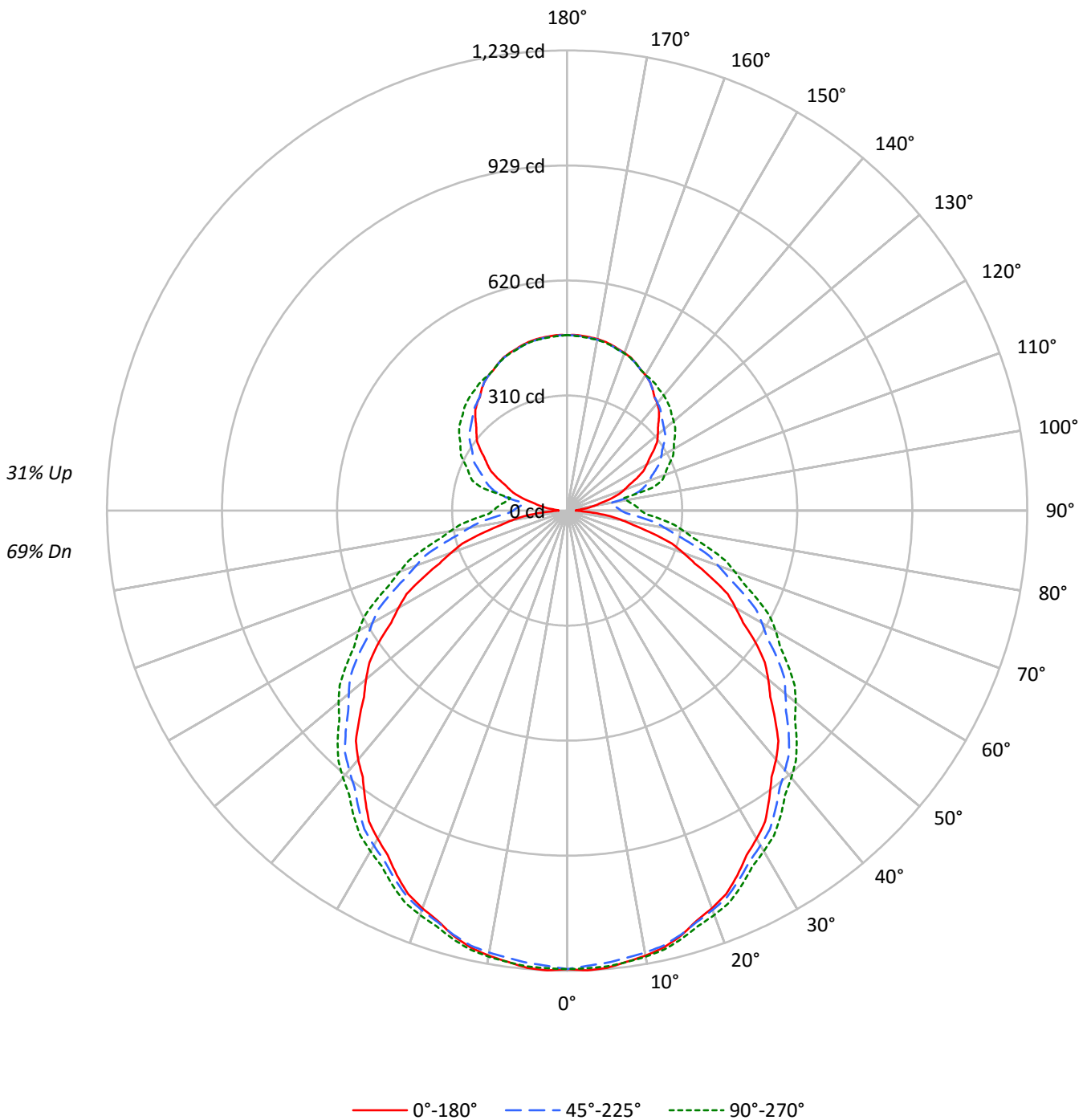
Input Watts (W): 43.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	112	112	112	112	105	105	105	105	94	94	94	83	83	83	73	73	73	69
1	101	96	91	87	95	90	86	83	80	77	74	71	69	66	63	61	59	55
2	91	83	76	70	85	78	72	67	69	65	60	62	58	54	54	51	49	45
3	83	72	64	58	78	68	61	55	61	55	50	54	49	45	48	44	41	37
4	75	64	55	48	71	60	52	46	54	47	42	48	43	39	42	38	35	32
5	69	57	48	41	65	54	46	40	48	41	36	43	37	33	38	34	30	27
6	64	51	42	36	60	48	40	34	43	37	32	39	33	29	34	30	26	24
7	59	46	37	31	55	44	36	30	39	33	28	35	30	26	31	27	23	21
8	55	42	33	28	51	40	32	27	36	29	25	32	27	23	29	24	21	19
9	51	38	30	25	48	36	29	24	33	26	22	30	24	20	26	22	19	17
10	48	35	27	22	45	33	26	21	30	24	20	27	22	18	25	20	17	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9968	9968	9968
5°	9998	9741	9769
10°	9937	9582	9575
15°	9848	9397	9346
20°	9714	9194	9123
25°	9563	8966	8879
30°	9399	8739	8627
35°	9213	8507	8407
40°	9065	8285	8178
45°	8844	8081	7981
50°	8658	7846	7773
55°	8466	7625	7529
60°	8166	7342	7306
65°	7837	7040	7032
70°	7439	6694	6714
75°	6882	6312	6425
80°	6266	5946	6141
85°	5484	5623	5977



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.9	2.1
10°-20°	335.0	5.9
20°-30°	506.5	8.9
30°-40°	612.9	10.8
40°-50°	647.9	11.4
50°-60°	609.8	10.8
60°-70°	505.9	8.9
70°-80°	355.4	6.3
80°-90°	202.3	3.6
90°-100°	135.4	2.4
100°-110°	191.3	3.4
110°-120°	256.4	4.5
120°-130°	283.7	5.0
130°-140°	282.2	5.0
140°-150°	253.3	4.5
150°-160°	201.9	3.6
160°-170°	130.2	2.3
170°-180°	44.9	0.8
0°-30°	958.4	16.9
0°-40°	1571.3	27.7
0°-60°	2829.0	49.9
0°-90°	3892.5	68.6
90°-120°	583.2	10.3
90°-150°	1402.3	24.7
90°-180°	1779.0	31.4
0°-180°	5671.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1235	1235	1235	1235	1235	
5°	1236	1232	1222	1233	1232	117
15°	1185	1186	1182	1194	1193	334
25°	1084	1092	1096	1111	1113	499
35°	948	965	979	997	1002	594
45°	791	817	843	866	874	611
55°	619	649	690	716	726	552
65°	429	473	520	553	566	425
75°	238	289	347	384	398	253
85°	73	132	194	234	249	78
90°	23	83	145	185	199	15
95°	37	72	128	166	180	39
105°	119	150	202	237	238	125
115°	207	222	264	294	305	204
125°	285	287	319	345	355	254
135°	349	349	360	382	392	269
145°	401	400	400	409	415	250
155°	438	438	437	438	438	202
165°	462	460	460	463	460	130
175°	472	470	471	474	470	45
180°	472	472	472	472	472	



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CATALOG NUMBER: S124DIP-S1020D365U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1234.7	1234.7	1234.7	1234.7	1234.7	1234.7	1234.7	1234.7	1234.7	1234.7	1234.7
2.5°	1239.1	1238.4	1237.6	1236.9	1236.1	1234.8	1232.8	1230.9	1228.9	1226.9	1228.6
5°	1236.0	1235.1	1234.2	1233.3	1232.4	1230.8	1228.7	1226.5	1224.4	1222.2	1224.7
7.5°	1225.5	1225.0	1224.4	1223.9	1223.3	1222.2	1220.4	1218.6	1216.8	1215.0	1217.8
10°	1216.7	1216.4	1216.1	1215.8	1215.5	1214.5	1213.0	1211.5	1209.9	1208.4	1211.2
12.5°	1204.5	1204.5	1204.4	1204.3	1204.3	1203.7	1202.7	1201.6	1200.6	1199.5	1202.1
15°	1184.9	1185.2	1185.5	1185.8	1186.1	1185.8	1184.9	1184.0	1183.0	1182.1	1184.9
17.5°	1158.1	1159.0	1159.9	1160.8	1161.8	1162.1	1161.9	1161.8	1161.6	1161.4	1164.2
20°	1139.3	1140.2	1141.1	1142.0	1143.0	1143.6	1143.9	1144.2	1144.5	1144.8	1147.9
22.5°	1118.2	1119.4	1120.6	1121.8	1122.9	1123.8	1124.3	1124.9	1125.4	1126.0	1129.1
25°	1084.0	1085.8	1087.6	1089.5	1091.3	1092.7	1093.6	1094.6	1095.5	1096.4	1099.8
27.5°	1045.8	1048.5	1051.2	1053.9	1056.6	1058.7	1060.1	1061.5	1062.9	1064.3	1067.5
30°	1020.4	1022.8	1025.3	1027.7	1030.2	1032.5	1034.6	1036.8	1038.9	1041.1	1044.5
32.5°	992.7	995.7	998.6	1001.6	1004.5	1007.2	1009.6	1012.0	1014.4	1016.8	1020.6
35°	948.5	952.2	955.8	959.5	963.2	966.6	969.7	972.7	975.8	978.9	983.2
37.5°	903.9	908.2	912.4	916.7	920.9	924.9	928.7	932.5	936.4	940.2	944.5
40°	875.2	879.2	883.2	887.2	891.2	895.3	899.6	903.9	908.2	912.5	917.1
42.5°	842.0	846.5	851.0	855.5	859.9	864.7	869.7	874.8	879.8	884.9	890.0
45°	790.8	796.7	802.5	808.4	814.2	820.0	825.9	831.7	837.5	843.4	848.6
47.5°	741.9	747.9	753.9	760.0	766.0	772.4	779.1	785.9	792.7	799.4	804.8
50°	706.5	713.3	720.0	726.8	733.5	740.3	747.1	753.8	760.6	767.3	773.5
52.5°	671.1	677.9	684.6	691.4	698.2	705.4	713.1	720.9	728.6	736.4	742.5
55°	619.4	625.9	632.3	638.8	645.2	653.0	662.3	671.5	680.7	689.9	696.1
57.5°	561.6	569.6	577.6	585.6	593.6	602.1	611.3	620.5	629.6	638.8	646.1
60°	524.0	532.0	540.0	548.0	556.0	565.0	575.2	585.3	595.4	605.6	612.6
62.5°	487.5	496.2	505.0	513.7	522.4	531.8	542.0	552.1	562.3	572.4	579.5
65°	428.6	438.4	448.3	458.1	467.9	478.1	488.5	499.0	509.4	519.9	527.5
67.5°	371.9	382.4	392.8	403.3	413.7	424.5	435.7	446.9	458.1	469.3	477.1
70°	333.2	343.7	354.1	364.5	375.0	386.1	397.7	409.4	421.1	432.8	441.1
72.5°	295.6	306.3	317.0	327.7	338.4	349.9	362.3	374.7	387.2	399.6	407.6
75°	237.8	249.2	260.5	271.9	283.3	295.4	308.3	321.2	334.1	347.0	355.6
77.5°	183.9	195.9	208.0	220.0	232.1	244.8	258.4	271.9	285.4	298.9	307.6
80°	150.7	163.0	175.3	187.6	199.9	212.8	226.3	239.8	253.3	266.8	276.1
82.5°	117.5	130.3	143.1	155.9	168.6	181.8	195.3	208.8	222.4	235.9	245.3
85°	73.3	86.2	99.1	112.0	124.9	138.3	152.1	165.9	179.7	193.6	202.8
87.5°	41.1	53.8	66.6	79.3	92.0	105.1	118.7	132.3	145.9	159.4	168.5
90°	23.2	36.3	49.5	62.6	75.8	89.3	103.1	117.0	130.8	144.7	154.0
92.5°	25.5	36.6	47.7	58.8	69.9	82.4	96.2	110.1	123.9	137.7	146.9
95°	37.4	44.9	52.3	59.8	67.3	77.4	90.0	102.7	115.4	128.1	136.8
97.5°	57.6	68.0	78.4	88.8	99.2	106.2	109.9	113.6	117.3	121.0	129.1
100°	73.2	82.6	92.0	101.4	110.8	116.0	117.2	118.3	119.5	120.6	127.6
102.5°	91.8	99.9	107.9	116.0	124.0	133.2	143.5	153.8	164.1	174.5	168.1
105°	118.8	125.4	132.1	138.7	145.3	154.5	166.2	178.0	189.8	201.5	209.9
107.5°	146.2	151.5	156.7	162.0	167.3	175.6	186.8	198.1	209.4	220.7	228.6
110°	163.7	168.3	172.8	177.3	181.9	189.8	201.0	212.2	223.4	234.7	241.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	180.7	185.0	189.2	193.4	197.7	205.0	215.5	226.0	236.5	246.9	253.7
115°	206.9	209.9	212.9	215.9	218.9	225.3	235.0	244.8	254.6	264.3	271.2
117.5°	231.7	233.7	235.7	237.6	239.6	245.3	254.6	263.9	273.3	282.6	288.9
120°	247.6	248.8	250.1	251.3	252.5	257.6	266.4	275.2	284.1	292.9	299.2
122.5°	263.4	263.8	264.2	264.5	264.9	269.4	277.9	286.4	294.9	303.5	309.7
125°	284.7	284.7	284.7	284.7	284.8	288.5	296.0	303.6	311.1	318.6	324.7
127.5°	305.9	305.7	305.5	305.3	305.0	308.0	314.3	320.6	326.8	333.1	338.6
130°	318.7	318.5	318.2	318.0	317.8	320.2	325.4	330.5	335.7	340.8	346.4
132.5°	331.4	331.2	331.1	330.9	330.7	332.8	337.0	341.2	345.5	349.7	355.1
135°	349.1	349.0	349.0	348.9	348.8	350.0	352.5	354.9	357.4	359.8	364.9
137.5°	366.0	365.7	365.5	365.2	364.9	365.5	366.8	368.2	369.6	371.0	375.7
140°	377.0	376.9	376.7	376.6	376.4	376.6	377.1	377.5	378.0	378.4	382.7
142.5°	385.8	386.0	386.3	386.5	386.7	386.8	386.7	386.6	386.5	386.4	390.1
145°	400.7	400.7	400.6	400.5	400.5	400.4	400.4	400.4	400.4	400.4	402.3
147.5°	412.8	413.0	413.1	413.2	413.4	413.4	413.3	413.2	413.1	413.1	413.4
150°	421.6	421.6	421.6	421.6	421.6	421.6	421.5	421.4	421.3	421.3	421.3
152.5°	427.8	428.0	428.2	428.4	428.6	428.6	428.5	428.3	428.2	428.1	428.2
155°	437.9	438.0	438.0	438.1	438.2	438.1	437.9	437.6	437.4	437.2	437.5
157.5°	446.6	446.5	446.5	446.4	446.4	446.2	446.0	445.7	445.4	445.2	445.6
160°	451.7	451.4	451.2	451.0	450.7	450.6	450.5	450.4	450.3	450.2	450.7
162.5°	456.2	455.9	455.6	455.3	455.0	454.8	454.7	454.6	454.6	454.5	455.0
165°	461.9	461.5	461.1	460.7	460.3	460.1	460.1	460.1	460.1	460.1	460.8
167.5°	466.4	466.0	465.6	465.2	464.8	464.6	464.5	464.5	464.4	464.4	465.1
170°	469.0	468.5	468.0	467.6	467.1	466.9	467.0	467.1	467.1	467.2	467.8
172.5°	470.7	470.2	469.7	469.3	468.8	468.6	468.7	468.8	468.8	468.9	469.5
175°	472.5	472.0	471.6	471.1	470.6	470.4	470.5	470.6	470.7	470.7	471.5
177.5°	473.4	472.9	472.5	472.0	471.6	471.4	471.6	471.7	471.8	471.9	472.5
180°	472.5	472.5	472.5	472.5	472.5	472.5	472.5	472.5	472.5	472.5	472.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1234.7	1234.7	1234.7	1234.7	1234.7	1234.7	1234.7	1234.7
2.5°	1230.4	1232.1	1233.8	1234.5	1234.3	1234.0	1233.8	1233.6
5°	1227.1	1229.6	1232.1	1233.1	1232.8	1232.5	1232.2	1231.9
7.5°	1220.6	1223.3	1226.1	1227.3	1227.0	1226.7	1226.4	1226.1
10°	1213.9	1216.7	1219.5	1220.7	1220.4	1220.1	1219.8	1219.5
12.5°	1204.6	1207.1	1209.6	1210.9	1210.8	1210.7	1210.7	1210.6
15°	1187.7	1190.4	1193.2	1194.4	1194.1	1193.8	1193.5	1193.2
17.5°	1167.0	1169.9	1172.7	1174.0	1173.7	1173.5	1173.2	1173.0
20°	1150.9	1154.0	1157.1	1158.6	1158.6	1158.6	1158.6	1158.6
22.5°	1132.1	1135.2	1138.3	1140.1	1140.6	1141.0	1141.5	1142.0
25°	1103.2	1106.5	1109.9	1111.8	1112.1	1112.4	1112.7	1113.0
27.5°	1070.6	1073.7	1076.9	1078.6	1079.0	1079.4	1079.7	1080.1
30°	1047.9	1051.2	1054.6	1056.6	1057.2	1057.8	1058.5	1059.1
32.5°	1024.5	1028.4	1032.3	1034.5	1035.1	1035.7	1036.3	1037.0
35°	987.5	991.8	996.1	998.7	999.6	1000.5	1001.5	1002.4
37.5°	948.9	953.3	957.6	960.3	961.3	962.3	963.2	964.2
40°	921.7	926.3	931.0	933.9	935.1	936.3	937.6	938.8
42.5°	895.1	900.2	905.3	908.3	909.3	910.3	911.3	912.2
45°	853.8	859.1	864.3	867.7	869.2	870.7	872.3	873.8
47.5°	810.2	815.6	821.1	824.7	826.5	828.4	830.2	832.1
50°	779.6	785.8	791.9	795.9	797.8	799.6	801.4	803.3
52.5°	748.7	754.8	761.0	764.9	766.8	768.6	770.5	772.3
55°	702.2	708.4	714.5	718.5	720.3	722.2	724.0	725.9
57.5°	653.4	660.7	668.0	672.5	674.2	676.0	677.7	679.4
60°	619.7	626.8	633.8	638.6	641.1	643.5	646.0	648.4
62.5°	586.5	593.6	600.7	605.4	607.9	610.3	612.8	615.3
65°	535.2	542.9	550.6	555.7	558.1	560.6	563.0	565.5
67.5°	484.9	492.7	500.5	505.6	508.0	510.4	512.8	515.2
70°	449.3	457.6	465.9	471.2	473.3	475.5	477.6	479.8
72.5°	415.7	423.7	431.8	437.0	439.4	441.8	444.2	446.6
75°	364.2	372.8	381.4	387.1	389.9	392.7	395.4	398.2
77.5°	316.4	325.1	333.8	339.7	342.6	345.6	348.5	351.5
80°	285.3	294.5	303.7	309.5	312.0	314.5	316.9	319.4
82.5°	254.8	264.3	273.7	279.8	282.5	285.2	287.9	290.6
85°	212.0	221.2	230.4	236.6	239.7	242.7	245.8	248.9
87.5°	177.5	186.5	195.5	201.3	204.1	206.8	209.5	212.3
90°	163.4	172.8	182.2	188.2	190.8	193.4	196.0	198.6
92.5°	156.0	165.1	174.3	180.1	182.6	185.1	187.6	190.0
95°	145.6	154.4	163.1	168.9	171.8	174.6	177.5	180.3
97.5°	137.2	145.3	153.4	158.8	161.6	164.3	167.0	169.7
100°	134.5	141.5	148.5	153.1	155.3	157.5	159.8	162.0
102.5°	161.8	155.4	149.1	147.1	149.5	151.9	154.3	156.7
105°	218.3	226.7	235.1	239.1	238.7	238.3	238.0	237.6
107.5°	236.5	244.4	252.3	257.5	260.0	262.6	265.1	267.6
110°	249.1	256.3	263.6	268.5	271.2	273.9	276.6	279.3



TEST NUMBER: P332628

CATALOG NUMBER: S124DIP-S1020D365U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	260.5	267.3	274.1	278.9	281.6	284.4	287.1	289.9
115°	278.1	285.1	292.0	296.5	298.7	300.8	303.0	305.1
117.5°	295.3	301.7	308.0	312.4	314.8	317.3	319.7	322.1
120°	305.5	311.8	318.1	322.4	324.7	327.0	329.3	331.6
122.5°	316.0	322.2	328.4	332.6	334.6	336.7	338.7	340.8
125°	330.8	336.8	342.9	346.9	348.8	350.8	352.7	354.6
127.5°	344.0	349.5	355.0	358.8	360.8	362.8	364.8	366.9
130°	352.1	357.7	363.3	367.0	368.8	370.7	372.5	374.4
132.5°	360.4	365.8	371.2	374.7	376.5	378.3	380.1	381.8
135°	370.0	375.1	380.1	383.7	385.7	387.7	389.7	391.7
137.5°	380.3	385.0	389.7	392.7	394.2	395.7	397.2	398.7
140°	386.9	391.1	395.4	398.3	399.9	401.5	403.1	404.7
142.5°	393.8	397.4	401.1	403.6	404.9	406.2	407.5	408.8
145°	404.3	406.2	408.1	409.8	411.1	412.5	413.9	415.3
147.5°	413.7	414.0	414.3	415.0	416.1	417.1	418.2	419.2
150°	421.3	421.3	421.3	421.3	421.4	421.5	421.5	421.6
152.5°	428.3	428.4	428.6	428.6	428.5	428.5	428.5	428.4
155°	437.8	438.1	438.4	438.5	438.2	438.0	437.8	437.5
157.5°	446.0	446.4	446.8	446.8	446.4	446.0	445.6	445.2
160°	451.2	451.7	452.1	452.1	451.7	451.2	450.7	450.2
162.5°	455.4	455.9	456.4	456.3	455.8	455.3	454.7	454.2
165°	461.4	462.0	462.7	462.6	461.9	461.2	460.5	459.8
167.5°	465.8	466.5	467.1	467.1	466.3	465.5	464.7	464.0
170°	468.5	469.1	469.7	469.6	468.9	468.1	467.3	466.5
172.5°	470.2	470.8	471.4	471.3	470.5	469.6	468.8	467.9
175°	472.2	472.9	473.6	473.5	472.5	471.6	470.6	469.7
177.5°	473.0	473.5	474.0	473.8	473.1	472.3	471.6	470.8
180°	472.5	472.5	472.5	472.5	472.5	472.5	472.5	472.5

(END OF REPORT)