

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: P332048

Luminaire Tested: **S123DIP-S1165D365U835-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332048
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S1165D365U835-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 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: 6300.9 lumens
Efficiency: N/A
Efficacy: 126.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: Semi-Direct

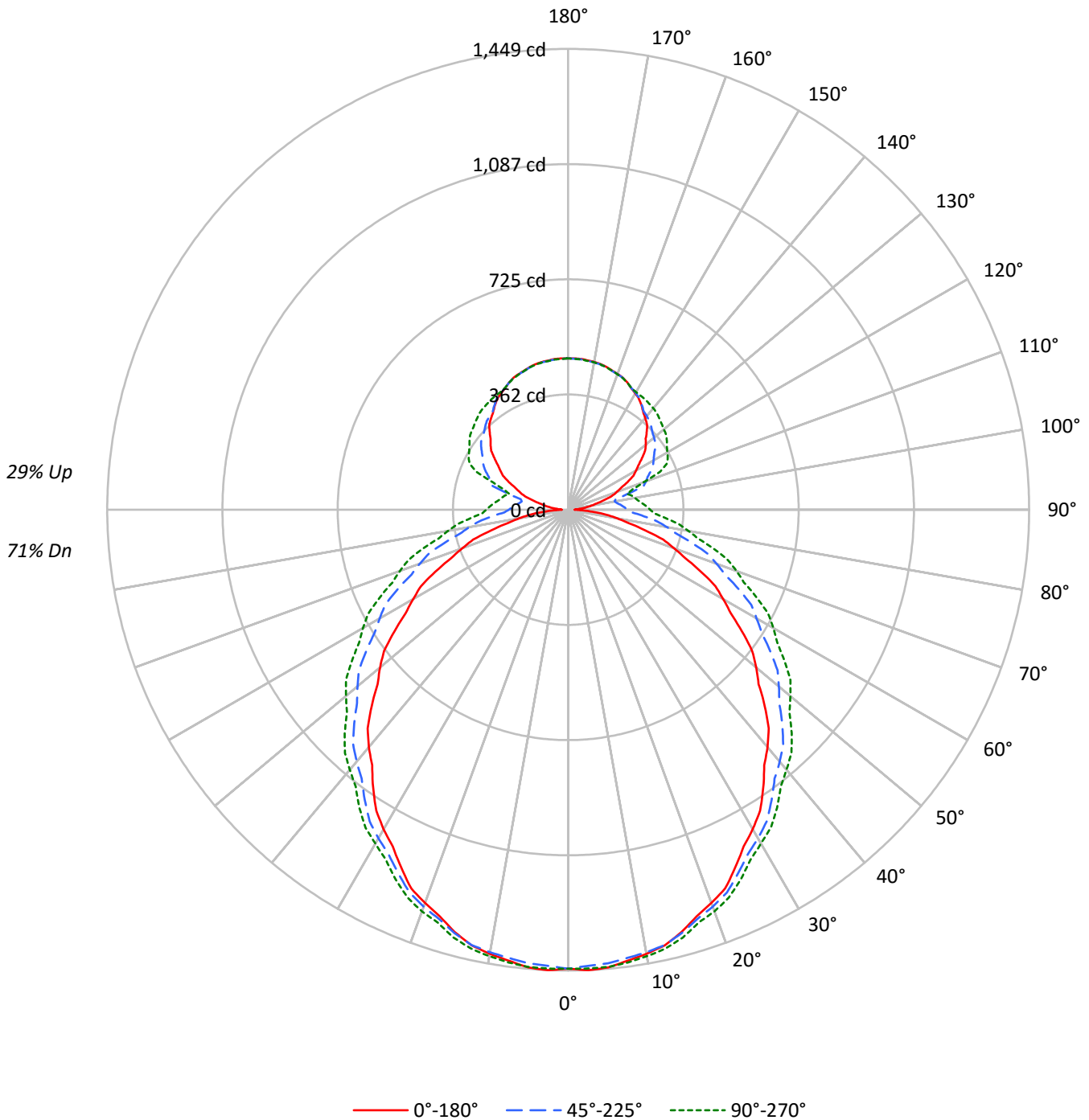
Input Watts (W): 49.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332048

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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	50	30	10	50	30	10	0		
RCR																										
0	112	112	112	112	106	106	106	106	95	95	95	84	84	84	75	75	75	75	75	75	75	75	75	71		
1	101	96	91	87	95	91	87	83	81	78	75	72	70	67	64	62	60	60	60	60	60	60	60	56		
2	91	83	76	70	86	78	72	67	70	65	61	63	59	55	55	52	50	50	50	50	50	50	50	46		
3	83	72	64	58	78	69	61	55	61	55	51	55	50	46	49	45	42	42	42	42	42	42	42	38		
4	76	64	55	49	71	61	53	47	54	48	43	49	43	39	43	39	36	36	36	36	36	36	36	32		
5	70	57	48	41	65	54	46	40	49	42	37	44	38	34	39	34	31	31	31	31	31	31	31	28		
6	64	51	42	36	60	48	40	35	44	37	32	39	34	29	35	31	27	27	27	27	27	27	27	24		
7	59	46	38	32	56	44	36	30	40	33	28	36	30	26	32	27	24	24	24	24	24	24	24	21		
8	55	42	34	28	52	40	32	27	36	30	25	33	27	23	29	25	21	21	21	21	21	21	21	19		
9	51	38	30	25	48	37	29	24	33	27	22	30	25	21	27	23	19	19	19	19	19	19	19	17		
10	48	35	28	22	45	34	27	22	31	25	20	28	23	19	25	21	17	17	17	17	17	17	17	16		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15532	15532	15532
5°	15581	15141	15150
10°	15441	14792	14718
15°	15242	14397	14247
20°	14958	13944	13729
25°	14607	13423	13185
30°	14248	12956	12632
35°	13844	12460	12191
40°	13459	12010	11719
45°	13033	11577	11342
50°	12611	11149	10926
55°	12146	10713	10553
60°	11692	10267	10169
65°	11230	9793	9712
70°	10529	9260	9244
75°	9643	8650	8768
80°	8626	8052	8224
85°	7681	7639	7911



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.8	2.2
10°-20°	390.0	6.2
20°-30°	583.2	9.3
30°-40°	696.5	11.1
40°-50°	728.7	11.6
50°-60°	683.9	10.9
60°-70°	571.2	9.1
70°-80°	408.7	6.5
80°-90°	245.0	3.9
90°-100°	170.2	2.7
100°-110°	194.8	3.1
110°-120°	273.0	4.3
120°-130°	295.0	4.7
130°-140°	288.6	4.6
140°-150°	256.0	4.1
150°-160°	203.2	3.2
160°-170°	131.1	2.1
170°-180°	45.2	0.7
0°-30°	1110.0	17.6
0°-40°	1806.5	28.7
0°-60°	3219.1	51.1
0°-90°	4443.9	70.5
90°-120°	638.0	10.1
90°-150°	1477.5	23.4
90°-180°	1857.0	29.5
0°-180°	6300.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1443	1443	1443	1443	1443	
5°	1445	1441	1432	1444	1443	137
15°	1375	1380	1379	1393	1393	387
25°	1242	1257	1262	1282	1283	572
35°	1069	1094	1114	1137	1144	668
45°	874	912	951	980	993	674
55°	666	719	775	816	830	597
65°	461	522	591	636	654	455
75°	250	324	402	452	473	267
85°	77	156	239	290	308	81
90°	21	102	186	239	257	15
95°	39	88	167	216	234	40
105°	118	159	195	179	192	124
115°	205	228	286	326	341	203
125°	283	288	333	366	378	253
135°	350	351	369	397	405	269
145°	402	402	403	416	423	251
155°	441	440	440	442	440	203
165°	465	464	463	466	464	131
175°	476	474	474	476	474	45
180°	476	476	476	476	476	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0
2.5°	1449.3	1448.5	1447.6	1446.8	1445.9	1444.4	1442.2	1439.9	1437.7	1435.5	1437.7
5°	1444.6	1443.9	1443.2	1442.5	1441.8	1440.4	1438.3	1436.2	1434.1	1432.0	1434.8
7.5°	1430.4	1430.6	1430.7	1430.9	1431.0	1430.1	1428.0	1426.0	1424.0	1421.9	1425.4
10°	1417.9	1418.6	1419.3	1420.0	1420.7	1420.1	1418.4	1416.6	1414.9	1413.1	1416.6
12.5°	1402.8	1403.7	1404.7	1405.7	1406.7	1406.6	1405.4	1404.2	1403.0	1401.8	1405.0
15°	1375.4	1376.5	1377.5	1378.6	1379.6	1380.0	1379.6	1379.3	1378.9	1378.6	1382.1
17.5°	1340.8	1342.9	1345.0	1347.1	1349.2	1350.2	1350.1	1349.9	1349.8	1349.6	1352.8
20°	1315.7	1317.8	1319.9	1322.0	1324.1	1325.5	1326.2	1326.9	1327.6	1328.3	1331.4
22.5°	1289.3	1291.4	1293.5	1295.6	1297.7	1299.2	1300.2	1301.2	1302.1	1303.1	1307.1
25°	1241.8	1245.3	1248.8	1252.3	1255.8	1258.0	1259.1	1260.1	1261.2	1262.2	1266.8
27.5°	1194.0	1198.0	1202.0	1206.0	1209.9	1213.1	1215.3	1217.5	1219.8	1222.0	1225.9
30°	1160.1	1164.6	1169.1	1173.7	1178.2	1181.9	1184.7	1187.5	1190.3	1193.1	1197.3
32.5°	1122.3	1127.4	1132.5	1137.6	1142.7	1147.1	1150.7	1154.4	1158.0	1161.6	1166.1
35°	1068.9	1074.5	1080.1	1085.7	1091.3	1096.3	1100.9	1105.4	1109.9	1114.5	1119.7
37.5°	1012.3	1018.6	1024.9	1031.2	1037.5	1043.4	1049.0	1054.6	1060.2	1065.8	1071.7
40°	974.6	980.9	987.2	993.4	999.7	1006.4	1013.4	1020.3	1027.3	1034.3	1040.3
42.5°	933.1	940.8	948.5	956.1	963.8	971.3	978.6	985.8	993.1	1000.4	1006.9
45°	874.0	882.4	890.7	899.1	907.5	916.1	924.8	933.5	942.3	951.0	957.6
47.5°	812.0	821.5	831.0	840.6	850.1	859.8	869.8	879.8	889.8	899.8	907.2
50°	771.8	781.6	791.4	801.1	810.9	821.2	832.1	842.9	853.7	864.5	872.6
52.5°	729.1	739.4	749.7	760.1	770.4	781.6	793.5	805.4	817.4	829.3	837.7
55°	666.5	678.0	689.5	701.1	712.6	724.6	737.2	749.8	762.4	775.0	784.4
57.5°	605.5	617.5	629.5	641.5	653.6	666.5	680.2	694.0	707.7	721.5	731.0
60°	562.7	575.3	587.9	600.5	613.0	626.5	640.8	655.1	669.5	683.8	693.6
62.5°	522.5	535.4	548.2	561.1	573.9	587.9	603.1	618.2	633.4	648.6	658.3
65°	460.6	474.2	487.8	501.4	515.1	529.6	544.9	560.3	575.7	591.0	601.5
67.5°	397.7	412.2	426.6	441.1	455.5	470.6	486.2	501.9	517.5	533.2	544.6
70°	353.7	368.7	383.7	398.7	413.8	429.7	446.4	463.2	480.0	496.7	507.9
72.5°	313.4	328.5	343.5	358.5	373.5	389.7	407.0	424.3	441.7	459.0	470.5
75°	249.9	266.4	282.8	299.2	315.6	332.5	350.0	367.5	384.9	402.4	413.9
77.5°	194.6	211.2	227.7	244.3	260.8	277.9	295.5	313.1	330.7	348.3	360.5
80°	155.6	172.7	189.9	207.0	224.1	241.7	259.9	278.1	296.2	314.4	326.3
82.5°	121.7	139.1	156.5	173.9	191.2	209.2	227.6	246.1	264.5	282.9	294.8
85°	77.0	94.5	112.0	129.4	146.9	164.9	183.4	201.9	220.4	238.9	250.8
87.5°	41.9	59.4	77.0	94.5	112.1	129.9	147.9	165.9	183.9	202.0	213.9
90°	20.8	38.7	56.6	74.5	92.4	110.8	129.6	148.4	167.3	186.1	198.3
92.5°	25.7	41.0	56.2	71.4	86.6	103.4	121.7	140.0	158.3	176.6	188.7
95°	38.8	49.3	59.7	70.1	80.5	94.7	112.6	130.6	148.6	166.6	178.0
97.5°	58.7	69.6	80.4	91.3	102.1	112.9	123.6	134.3	145.0	155.7	166.7
100°	73.9	86.6	99.4	112.1	124.9	133.1	137.0	140.8	144.6	148.4	159.2
102.5°	91.3	102.5	113.6	124.8	136.0	142.8	145.2	147.6	150.1	152.5	160.4
105°	117.9	127.1	136.4	145.6	154.9	163.5	171.4	179.4	187.3	195.3	191.2
107.5°	144.4	152.2	160.0	167.9	175.7	187.3	202.6	218.0	233.4	248.7	247.9
110°	162.1	169.0	175.9	182.8	189.8	200.6	215.5	230.3	245.1	260.0	266.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	180.2	185.9	191.6	197.4	203.1	213.1	227.4	241.7	256.0	270.2	279.1
115°	205.4	210.1	214.7	219.4	224.0	233.0	246.3	259.6	272.9	286.1	295.3
117.5°	231.0	234.2	237.3	240.5	243.7	251.3	263.5	275.7	287.9	300.0	309.0
120°	245.9	248.3	250.8	253.2	255.7	262.8	274.6	286.3	298.1	309.8	318.5
122.5°	262.3	263.8	265.2	266.7	268.2	274.6	285.9	297.1	308.4	319.7	327.9
125°	283.2	283.8	284.4	285.1	285.7	291.2	301.7	312.1	322.6	333.0	340.5
127.5°	304.9	305.2	305.5	305.8	306.1	310.6	319.3	328.1	336.9	345.6	352.8
130°	318.5	318.8	319.1	319.3	319.6	323.4	330.7	338.0	345.3	352.6	359.6
132.5°	330.3	330.8	331.4	331.9	332.5	335.7	341.5	347.4	353.2	359.0	365.7
135°	349.8	349.9	350.0	350.2	350.3	352.4	356.6	360.7	364.9	369.1	375.6
137.5°	366.4	366.8	367.1	367.4	367.7	369.0	371.4	373.7	376.1	378.4	384.3
140°	376.5	377.0	377.4	377.9	378.4	379.3	380.5	381.8	383.1	384.4	389.9
142.5°	387.0	387.1	387.3	387.5	387.7	388.0	388.5	388.9	389.4	389.8	394.8
145°	401.6	401.8	402.0	402.2	402.4	402.6	402.7	402.9	403.0	403.2	406.1
147.5°	413.8	414.2	414.5	414.9	415.2	415.5	415.7	415.8	416.0	416.1	417.1
150°	422.3	422.5	422.7	423.0	423.2	423.4	423.6	423.7	423.9	424.0	424.2
152.5°	429.9	430.0	430.1	430.2	430.3	430.5	430.5	430.6	430.7	430.8	431.1
155°	440.7	440.5	440.3	440.2	440.0	440.0	440.1	440.1	440.2	440.3	440.7
157.5°	449.0	449.0	449.0	448.9	448.9	448.9	448.8	448.7	448.6	448.6	449.0
160°	454.1	454.0	453.9	453.8	453.8	453.7	453.6	453.5	453.5	453.4	453.8
162.5°	458.9	458.7	458.5	458.3	458.1	457.9	457.8	457.8	457.7	457.6	458.1
165°	464.7	464.4	464.2	464.0	463.7	463.6	463.5	463.4	463.3	463.3	463.9
167.5°	469.2	468.9	468.6	468.3	467.9	467.8	467.8	467.8	467.8	467.8	468.4
170°	471.7	471.4	471.1	470.8	470.5	470.3	470.3	470.3	470.3	470.3	471.0
172.5°	473.4	473.1	472.7	472.3	471.9	471.8	471.8	471.9	472.0	472.0	472.7
175°	475.6	475.2	474.8	474.5	474.1	473.9	474.0	474.1	474.1	474.2	474.8
177.5°	476.2	475.9	475.6	475.3	474.9	474.8	474.9	474.9	475.0	475.1	475.6
180°	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0
2.5°	1439.9	1442.2	1444.4	1445.4	1445.1	1444.8	1444.5	1444.3
5°	1437.6	1440.4	1443.2	1444.4	1444.1	1443.7	1443.4	1443.0
7.5°	1428.9	1432.4	1435.9	1437.5	1437.0	1436.6	1436.2	1435.8
10°	1420.1	1423.6	1427.1	1428.5	1427.8	1427.1	1426.4	1425.7
12.5°	1408.3	1411.5	1414.7	1415.9	1415.2	1414.5	1413.8	1413.1
15°	1385.5	1389.0	1392.5	1394.1	1393.8	1393.4	1393.1	1392.7
17.5°	1355.9	1359.1	1362.2	1363.5	1363.1	1362.6	1362.1	1361.6
20°	1334.5	1337.7	1340.8	1342.6	1342.9	1343.3	1343.6	1344.0
22.5°	1311.1	1315.1	1319.0	1320.9	1320.7	1320.5	1320.3	1320.1
25°	1271.3	1275.9	1280.4	1282.7	1282.7	1282.7	1282.7	1282.7
27.5°	1229.8	1233.7	1237.6	1239.7	1240.0	1240.3	1240.6	1240.9
30°	1201.5	1205.7	1209.8	1211.9	1211.9	1211.9	1211.9	1211.9
32.5°	1170.6	1175.1	1179.5	1182.2	1183.0	1183.9	1184.7	1185.5
35°	1125.0	1130.2	1135.4	1138.8	1140.2	1141.6	1143.0	1144.3
37.5°	1077.6	1083.6	1089.5	1093.0	1094.2	1095.3	1096.4	1097.5
40°	1046.2	1052.1	1058.1	1061.7	1063.1	1064.5	1065.9	1067.3
42.5°	1013.4	1019.9	1026.4	1030.6	1032.5	1034.5	1036.4	1038.4
45°	964.3	970.9	977.6	982.3	985.1	987.9	990.7	993.4
47.5°	914.7	922.2	929.7	934.5	936.6	938.8	941.0	943.1
50°	880.6	888.7	896.7	901.9	904.4	906.8	909.3	911.7
52.5°	846.0	854.3	862.6	868.3	871.3	874.3	877.3	880.3
55°	793.8	803.2	812.7	818.8	821.6	824.4	827.2	830.0
57.5°	740.5	750.0	759.5	765.9	769.2	772.5	775.8	779.0
60°	703.3	713.1	722.9	729.7	733.6	737.4	741.2	745.1
62.5°	668.1	677.9	687.7	694.4	697.9	701.5	705.1	708.6
65°	612.0	622.5	633.0	639.9	643.4	646.9	650.4	653.9
67.5°	556.1	567.6	579.0	586.2	589.2	592.1	595.0	598.0
70°	519.1	530.3	541.4	548.8	552.3	555.8	559.2	562.7
72.5°	481.9	493.4	504.8	512.3	515.8	519.3	522.8	526.3
75°	425.5	437.0	448.5	456.4	460.6	464.8	469.0	473.1
77.5°	372.6	384.8	397.0	404.6	407.9	411.1	414.3	417.5
80°	338.1	350.0	361.9	369.6	373.1	376.6	380.1	383.5
82.5°	306.7	318.6	330.4	338.1	341.6	345.1	348.6	352.1
85°	262.7	274.6	286.4	294.1	297.6	301.1	304.6	308.1
87.5°	225.8	237.8	249.7	257.4	261.0	264.5	268.0	271.5
90°	210.5	222.7	234.9	242.8	246.4	250.1	253.7	257.4
92.5°	200.8	212.9	225.0	232.7	236.0	239.3	242.6	245.9
95°	189.3	200.7	212.1	219.5	223.0	226.5	230.0	233.5
97.5°	177.8	188.8	199.8	207.1	210.7	214.3	217.9	221.4
100°	169.9	180.7	191.5	198.6	202.2	205.8	209.3	212.9
102.5°	168.3	176.2	184.1	189.8	193.5	197.1	200.7	204.4
105°	187.0	182.9	178.8	178.4	181.7	185.0	188.3	191.6
107.5°	247.1	246.2	245.4	241.3	233.9	226.5	219.1	211.7
110°	273.0	279.4	285.9	285.0	276.5	268.1	259.7	251.2



TEST NUMBER: P332048

CATALOG NUMBER: S123DIP-S1165D365U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	287.9	296.8	305.6	310.4	311.1	311.8	312.5	313.2
115°	304.5	313.7	322.8	329.0	332.1	335.2	338.3	341.4
117.5°	317.9	326.8	335.8	341.7	344.4	347.2	350.0	352.8
120°	327.2	335.8	344.5	350.0	352.5	354.9	357.4	359.8
122.5°	336.1	344.3	352.4	357.8	360.3	362.8	365.3	367.8
125°	348.0	355.5	363.0	368.0	370.6	373.2	375.8	378.4
127.5°	360.0	367.1	374.3	379.0	381.2	383.4	385.6	387.9
130°	366.5	373.5	380.4	384.9	386.8	388.7	390.7	392.6
132.5°	372.4	379.1	385.7	390.1	392.3	394.5	396.6	398.8
135°	382.1	388.6	395.1	399.2	400.7	402.2	403.7	405.2
137.5°	390.2	396.1	402.0	405.7	407.3	408.9	410.5	412.1
140°	395.5	401.1	406.6	410.2	411.8	413.4	414.9	416.5
142.5°	399.7	404.6	409.6	412.8	414.3	415.8	417.4	418.9
145°	409.1	412.0	415.0	417.2	418.6	420.0	421.4	422.8
147.5°	418.1	419.1	420.1	421.1	422.0	422.8	423.7	424.6
150°	424.4	424.5	424.7	425.0	425.4	425.9	426.4	426.8
152.5°	431.4	431.7	432.0	432.0	431.8	431.5	431.3	431.1
155°	441.1	441.5	441.9	441.8	441.4	440.9	440.4	439.9
157.5°	449.5	450.0	450.5	450.4	449.8	449.2	448.5	447.9
160°	454.3	454.8	455.3	455.2	454.7	454.1	453.6	453.0
162.5°	458.7	459.2	459.7	459.8	459.3	458.8	458.3	457.8
165°	464.5	465.2	465.8	465.8	465.3	464.7	464.2	463.6
167.5°	469.0	469.7	470.3	470.3	469.7	469.0	468.4	467.8
170°	471.6	472.2	472.8	472.8	472.2	471.6	471.0	470.3
172.5°	473.3	473.9	474.5	474.5	473.8	473.1	472.4	471.7
175°	475.3	475.9	476.4	476.4	475.8	475.1	474.5	473.9
177.5°	476.1	476.6	477.1	477.0	476.4	475.8	475.1	474.5
180°	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6

(END OF REPORT)