

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: P333273-840

Luminaire Tested: **S125DIP-S1090D810U840-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333273-840  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-19,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S125DIP-S1090D810U840-4F0-1E-UDD-D4  
Description: DEFINE 5 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1090 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: 7246.1 lumens  
Efficiency: N/A  
Efficacy: 133.2 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.34  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

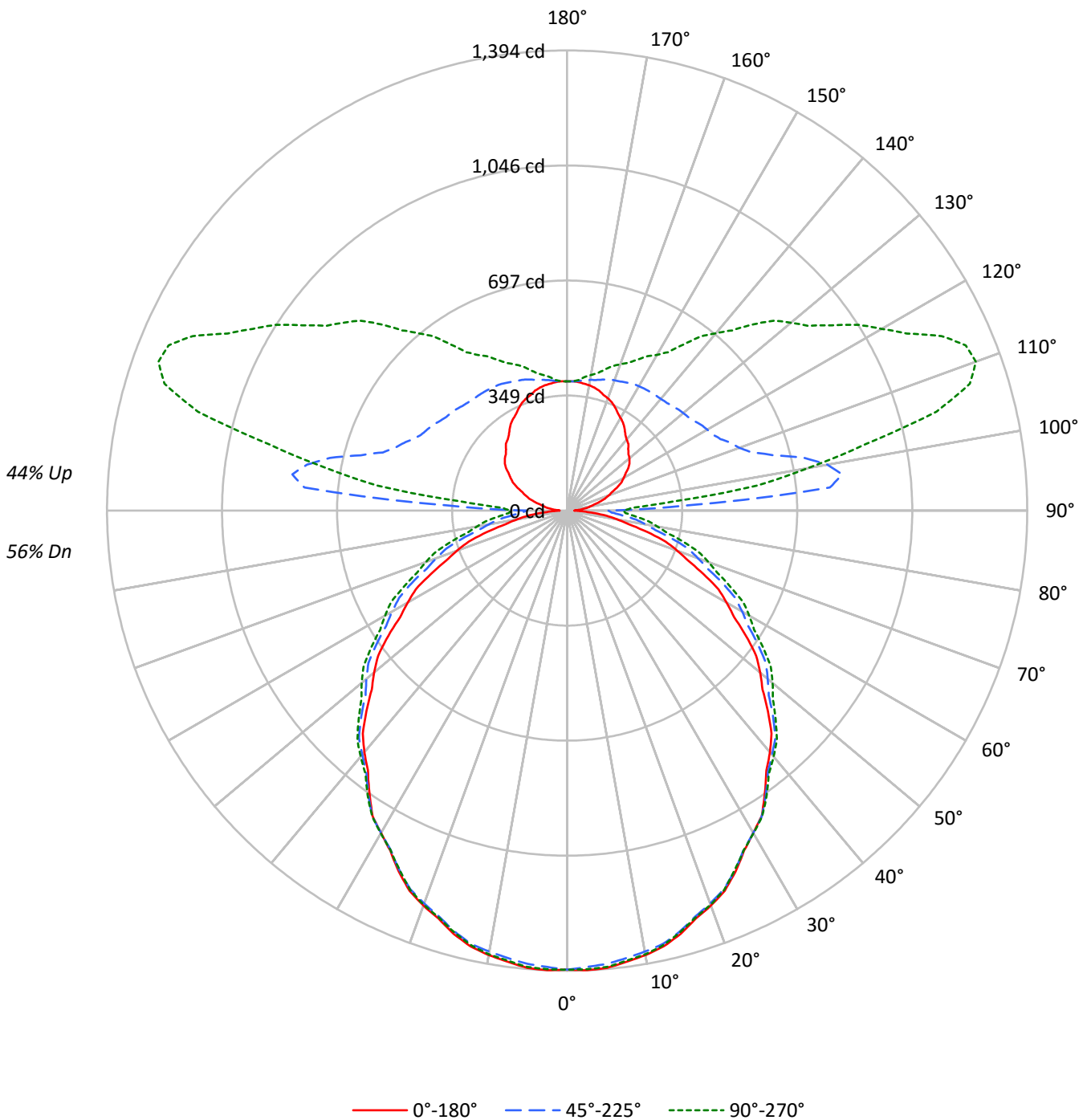
Input Watts (W): 54.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
RC	80									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	109	109	109	109	101	101	101	101	87	87	87	74	74	74	61	61	61	56																			
1	98	94	89	85	91	87	83	80	75	72	69	63	61	60	53	52	50	45																			
2	89	81	75	69	82	76	70	65	65	61	57	55	52	49	46	44	42	37																			
3	81	71	63	57	75	66	59	54	57	52	47	49	45	41	41	38	35	31																			
4	74	63	55	48	68	59	51	45	51	45	40	43	39	35	36	33	30	27																			
5	68	56	47	41	63	52	45	39	45	39	35	39	34	30	33	29	26	23																			
6	63	50	42	36	58	47	39	34	41	35	30	35	30	26	29	26	23	20																			
7	58	45	37	31	54	42	35	30	37	31	26	32	27	23	27	23	20	18																			
8	54	41	33	28	50	38	31	26	34	28	23	29	24	21	25	21	18	16																			
9	50	37	30	25	46	35	28	23	31	25	21	27	22	19	23	19	16	14																			
10	47	34	27	22	43	32	26	21	28	23	19	25	20	17	21	17	15	13																			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	8981	8981	8981
5°	8999	8815	8843
10°	8935	8658	8644
15°	8829	8469	8392
20°	8685	8236	8140
25°	8515	7987	7828
30°	8308	7712	7547
35°	8115	7461	7288
40°	7918	7195	7027
45°	7696	6968	6796
50°	7485	6722	6592
55°	7230	6489	6352
60°	6950	6223	6107
65°	6660	5946	5832
70°	6332	5566	5549
75°	5809	5201	5201
80°	5122	4760	4822
85°	4483	4460	4702



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	131.5	1.8
10°-20°	373.3	5.2
20°-30°	555.1	7.7
30°-40°	657.5	9.1
40°-50°	679.8	9.4
50°-60°	626.3	8.6
60°-70°	506.2	7.0
70°-80°	339.0	4.7
80°-90°	178.0	2.5
90°-100°	382.5	5.3
100°-110°	683.0	9.4
110°-120°	621.5	8.6
120°-130°	491.8	6.8
130°-140°	384.6	5.3
140°-150°	283.5	3.9
150°-160°	197.9	2.7
160°-170°	116.6	1.6
170°-180°	37.9	0.5
0°-30°	1059.9	14.6
0°-40°	1717.4	23.7
0°-60°	3023.5	41.7
0°-90°	4046.7	55.8
90°-120°	1687.0	23.3
90°-150°	2846.9	39.3
90°-180°	3199.0	44.1
0°-180°	7246.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1391	1391	1391	1391	1391	
5°	1391	1387	1378	1389	1388	132
15°	1328	1329	1320	1327	1322	374
25°	1206	1210	1202	1207	1201	555
35°	1044	1053	1050	1054	1054	653
45°	860	875	882	891	893	664
55°	661	683	705	719	725	591
65°	455	487	519	539	545	452
75°	251	287	330	356	364	266
85°	75	120	168	197	208	80
90°	23	73	124	158	171	16
95°	44	131	799	446	325	42
105°	102	160	647	1228	1158	107
115°	168	211	513	1067	1251	165
125°	226	265	472	840	978	201
135°	262	314	448	689	798	203
145°	303	346	439	554	614	190
155°	344	370	428	484	504	158
165°	376	386	411	436	442	106
175°	391	391	394	399	397	37
180°	392	392	392	392	392	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1390.6	1390.6	1390.6	1390.6	1390.6	1390.6	1390.6	1390.6	1390.6	1390.6	1390.6
2.5°	1393.8	1393.3	1392.8	1392.4	1391.9	1390.8	1389.1	1387.4	1385.7	1384.0	1385.7
5°	1390.6	1390.0	1389.4	1388.8	1388.2	1386.7	1384.6	1382.5	1380.4	1378.3	1380.7
7.5°	1378.3	1378.1	1377.8	1377.6	1377.4	1376.1	1373.9	1371.7	1369.6	1367.4	1369.5
10°	1367.4	1367.4	1367.4	1367.4	1367.4	1366.1	1363.7	1361.3	1358.9	1356.5	1358.6
12.5°	1352.1	1352.3	1352.6	1352.8	1353.1	1352.2	1350.3	1348.4	1346.5	1344.4	1346.2
15°	1327.9	1328.2	1328.5	1328.8	1329.1	1328.2	1326.1	1323.9	1321.8	1319.7	1321.5
17.5°	1296.2	1296.8	1297.4	1298.0	1298.6	1297.9	1295.8	1293.6	1291.5	1289.4	1290.8
20°	1273.3	1273.9	1274.6	1275.2	1275.8	1275.0	1272.8	1270.7	1268.6	1266.5	1267.4
22.5°	1247.1	1248.2	1249.3	1250.4	1251.5	1250.8	1248.5	1246.2	1243.7	1241.4	1242.5
25°	1206.5	1207.4	1208.3	1209.2	1210.1	1209.7	1207.9	1206.1	1204.3	1202.4	1203.7
27.5°	1161.2	1162.6	1163.9	1165.3	1166.6	1166.2	1164.2	1162.1	1160.0	1158.0	1158.8
30°	1127.4	1129.2	1131.0	1132.9	1134.7	1134.7	1132.9	1131.0	1129.2	1127.4	1128.0
32.5°	1096.9	1098.4	1100.0	1101.7	1103.2	1103.3	1102.0	1100.7	1099.3	1098.0	1098.6
35°	1044.3	1046.4	1048.5	1050.7	1052.8	1053.4	1052.5	1051.6	1050.7	1049.8	1050.7
37.5°	991.7	993.6	995.5	997.4	999.4	1000.3	1000.0	999.7	999.4	999.1	1000.3
40°	955.6	958.1	960.5	962.9	965.3	966.4	966.1	965.8	965.5	965.2	966.4
42.5°	916.4	919.6	922.7	925.8	929.0	930.9	931.6	932.2	932.9	933.6	935.0
45°	860.2	863.5	866.9	870.2	873.5	876.0	877.5	879.0	880.5	882.0	884.1
47.5°	802.7	805.8	808.9	811.9	815.1	817.9	820.5	823.1	825.8	828.3	831.4
50°	763.5	766.8	770.1	773.5	776.8	780.1	783.5	786.8	790.1	793.5	796.8
52.5°	722.0	726.1	730.1	734.2	738.2	742.3	746.4	750.4	754.5	758.5	762.1
55°	661.2	666.0	670.9	675.7	680.5	685.4	690.2	695.1	699.9	704.8	708.1
57.5°	599.1	604.8	610.7	616.5	622.3	628.0	633.6	639.1	644.7	650.3	654.1
60°	557.5	563.6	569.7	575.7	581.8	587.8	593.9	600.0	606.0	612.1	616.6
62.5°	517.3	523.3	529.4	535.4	541.5	547.8	554.3	560.9	567.4	573.9	579.0
65°	455.3	462.3	469.3	476.3	483.2	490.3	497.6	504.8	512.1	519.4	523.9
67.5°	397.0	403.7	410.4	417.2	423.8	430.9	438.4	445.8	453.1	460.5	466.1
70°	354.5	361.4	368.4	375.4	382.3	389.7	397.6	405.5	413.3	421.2	427.0
72.5°	313.1	320.2	327.4	334.7	341.8	349.7	358.4	367.0	375.6	384.2	390.4
75°	250.9	258.7	266.6	274.5	282.4	291.1	300.8	310.5	320.2	329.9	336.0
77.5°	191.2	200.3	209.3	218.4	227.5	236.7	246.0	255.4	264.7	274.0	280.6
80°	154.0	163.1	172.2	181.3	190.4	200.1	210.4	220.7	231.0	241.3	247.9
82.5°	120.3	129.8	139.4	149.0	158.5	168.5	179.2	189.7	200.3	210.8	217.2
85°	74.9	84.9	94.9	104.9	114.9	125.2	135.8	146.4	157.0	167.6	174.3
87.5°	42.7	52.5	62.5	72.6	82.6	92.9	103.3	113.9	124.4	135.0	142.2
90°	22.6	33.1	44.3	55.6	67.0	78.5	89.6	101.5	112.5	124.4	132.2
92.5°	29.3	40.3	55.8	74.6	97.1	130.0	183.7	266.5	355.6	362.0	320.2
95°	43.8	52.4	66.7	83.2	108.5	153.1	247.8	431.9	660.1	799.1	790.7
97.5°	59.4	67.4	78.9	94.7	117.4	151.5	217.3	354.6	592.5	839.8	965.2
100°	70.3	78.2	87.8	102.8	124.1	155.8	211.4	323.7	532.4	800.2	1004.0
102.5°	82.4	89.3	97.7	112.9	132.5	163.2	213.4	309.1	486.6	735.9	972.9
105°	101.5	106.3	115.1	127.8	145.3	174.4	218.2	297.6	438.6	647.4	880.1
107.5°	120.1	125.7	133.7	144.3	161.5	187.8	230.1	299.1	415.4	585.5	787.0
110°	133.5	138.8	145.5	156.2	171.8	198.3	239.1	302.2	406.2	555.2	733.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	148.0	152.5	157.9	167.9	182.7	208.2	247.5	307.1	402.0	535.7	691.9
115°	167.6	171.4	175.9	185.1	199.0	223.8	260.8	314.6	398.3	512.7	645.3
117.5°	185.3	189.0	193.0	201.5	216.3	239.8	274.9	324.1	397.4	498.2	614.6
120°	197.9	201.2	205.2	213.3	227.6	251.3	285.9	330.7	398.5	490.0	596.9
122.5°	210.1	212.3	215.2	222.7	237.8	261.2	295.5	338.2	398.8	482.4	581.0
125°	226.5	227.8	231.5	238.2	253.0	276.4	308.5	348.5	400.3	471.9	559.0
127.5°	238.3	240.3	245.1	253.8	269.4	292.4	322.3	358.6	403.5	463.8	538.1
130°	246.5	248.5	254.6	264.6	280.8	303.4	332.0	366.3	406.1	459.3	525.1
132.5°	251.8	254.7	262.2	273.7	290.8	313.0	340.7	372.0	408.4	454.8	513.1
135°	261.8	264.6	273.8	286.1	302.4	324.6	351.2	379.4	410.7	448.4	497.3
137.5°	274.4	276.5	285.1	297.5	313.6	335.9	359.2	385.2	413.9	444.3	483.9
140°	280.8	283.3	292.8	305.4	320.3	341.8	365.1	389.0	414.5	441.7	476.7
142.5°	289.7	291.2	299.8	312.3	326.4	346.3	368.0	390.5	414.5	440.2	470.8
145°	303.0	304.3	311.8	322.7	336.5	354.6	375.1	394.8	416.2	439.0	464.2
147.5°	315.5	316.5	323.3	333.6	345.9	361.8	379.8	397.7	416.9	437.0	458.3
150°	323.8	325.3	330.8	341.1	352.1	365.6	382.9	399.5	416.9	435.0	454.0
152.5°	332.5	333.6	338.4	347.4	357.9	370.0	386.1	400.8	416.3	432.5	449.6
155°	344.3	344.3	349.0	356.9	364.8	375.9	389.3	401.9	414.5	428.0	442.2
157.5°	354.7	354.6	358.3	365.1	372.0	380.4	391.9	402.7	412.5	423.2	435.3
160°	361.6	360.8	364.1	369.5	375.9	382.9	393.2	402.7	410.6	420.1	429.6
162.5°	367.3	366.6	369.7	374.6	379.6	385.5	394.5	402.0	408.7	416.3	424.4
165°	375.9	374.3	376.7	380.6	383.7	388.5	394.8	401.1	405.9	410.6	416.9
167.5°	381.5	380.7	382.1	384.4	386.6	389.6	394.8	399.2	401.4	405.1	409.5
170°	385.4	384.6	385.4	386.9	388.5	390.8	394.8	398.0	399.5	401.9	405.1
172.5°	387.9	386.5	387.2	388.8	389.7	390.8	394.2	396.7	397.0	398.1	400.6
175°	390.8	389.3	390.1	390.8	390.8	390.8	393.2	394.8	394.0	394.0	394.8
177.5°	392.2	391.0	391.0	391.6	391.0	391.0	392.2	392.9	391.6	391.6	392.2
180°	391.6	391.6	391.6	391.6	391.6	391.6	391.6	391.6	391.6	391.6	391.6



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1390.6	1390.6	1390.6	1390.6	1390.6	1390.6	1390.6	1390.6
2.5°	1387.4	1389.1	1390.8	1391.5	1391.3	1391.0	1390.8	1390.6
5°	1383.1	1385.5	1388.0	1389.1	1388.8	1388.5	1388.2	1387.9
7.5°	1371.6	1373.7	1375.8	1376.7	1376.4	1376.1	1375.8	1375.5
10°	1360.7	1362.8	1364.9	1365.8	1365.5	1365.2	1364.9	1364.6
12.5°	1347.8	1349.4	1351.0	1351.4	1350.7	1349.9	1349.1	1348.3
15°	1323.3	1325.1	1327.0	1327.3	1326.1	1324.8	1323.6	1322.4
17.5°	1292.2	1293.5	1294.9	1295.3	1294.5	1293.8	1293.1	1292.4
20°	1268.3	1269.2	1270.1	1270.6	1270.6	1270.6	1270.6	1270.6
22.5°	1243.7	1244.9	1246.0	1246.2	1245.5	1244.8	1244.1	1243.3
25°	1204.9	1206.1	1207.3	1207.1	1205.6	1204.1	1202.5	1201.0
27.5°	1159.6	1160.5	1161.3	1161.5	1160.9	1160.4	1159.8	1159.3
30°	1128.6	1129.2	1129.8	1130.0	1129.7	1129.4	1129.1	1128.8
32.5°	1099.2	1099.8	1100.4	1100.6	1100.2	1099.9	1099.6	1099.3
35°	1051.6	1052.5	1053.4	1053.8	1053.8	1053.8	1053.8	1053.8
37.5°	1001.5	1002.7	1003.9	1004.4	1004.3	1004.2	1004.0	1003.9
40°	967.7	968.9	970.1	971.0	971.6	972.2	972.8	973.4
42.5°	936.4	938.0	939.4	940.2	940.3	940.4	940.6	940.7
45°	886.3	888.4	890.5	891.7	892.0	892.3	892.6	892.9
47.5°	834.6	837.6	840.7	842.5	843.2	843.9	844.6	845.3
50°	800.1	803.4	806.8	808.9	809.8	810.7	811.6	812.5
52.5°	765.7	769.2	772.8	775.0	775.6	776.3	777.0	777.6
55°	711.4	714.8	718.1	720.4	721.6	722.9	724.1	725.3
57.5°	657.9	661.8	665.6	667.9	668.8	669.7	670.7	671.6
60°	621.2	625.7	630.3	633.0	633.9	634.8	635.7	636.6
62.5°	584.0	589.1	594.1	597.1	598.3	599.5	600.6	601.8
65°	528.5	533.0	537.6	540.5	541.7	542.9	544.1	545.3
67.5°	471.5	477.1	482.6	486.1	487.7	489.3	490.8	492.4
70°	432.7	438.5	444.2	448.1	449.9	451.7	453.5	455.3
72.5°	396.7	402.9	409.1	412.9	414.2	415.6	416.9	418.3
75°	342.0	348.1	354.2	357.9	359.4	360.9	362.4	364.0
77.5°	287.3	294.0	300.6	304.6	305.8	307.0	308.2	309.4
80°	254.6	261.3	267.9	271.9	273.1	274.3	275.5	276.7
82.5°	223.6	230.0	236.4	240.8	243.0	245.1	247.3	249.4
85°	181.0	187.6	194.3	198.8	201.3	203.7	206.1	208.5
87.5°	149.3	156.4	163.5	168.4	170.6	172.7	174.9	177.0
90°	140.0	147.7	155.4	161.6	163.7	165.8	168.7	170.9
92.5°	260.7	229.1	210.8	203.5	195.5	195.7	196.7	197.6
95°	680.5	567.2	476.8	414.9	360.9	339.3	335.2	324.6
97.5°	950.9	873.1	784.9	696.9	650.2	607.9	587.1	579.1
100°	1071.2	1038.8	963.9	885.9	833.2	778.2	750.7	739.9
102.5°	1108.6	1138.6	1105.7	1054.1	997.6	959.1	929.2	921.5
105°	1075.7	1189.9	1230.7	1226.2	1203.0	1179.0	1165.4	1158.0
107.5°	980.0	1130.3	1225.5	1270.7	1285.4	1287.1	1283.7	1279.3
110°	909.4	1065.2	1182.2	1253.3	1291.0	1308.1	1315.8	1317.9





TEST NUMBER: P333273-840

CATALOG NUMBER: S125DIP-S1090D810U840-4F0-1E-UDD-D4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	852.7	1000.7	1118.8	1201.7	1255.9	1283.7	1299.6	1307.4
115°	781.0	908.9	1022.5	1112.2	1175.6	1215.4	1239.3	1251.3
117.5°	731.8	842.5	940.9	1023.4	1087.0	1128.3	1152.3	1160.6
120°	704.8	804.7	896.7	969.7	1029.9	1069.6	1092.8	1100.9
122.5°	682.9	775.6	857.9	926.3	980.3	1016.8	1040.0	1047.4
125°	651.5	736.8	810.3	870.4	916.1	950.0	968.9	978.3
127.5°	619.1	698.8	767.4	823.7	865.7	896.0	914.1	919.4
130°	599.6	673.4	739.1	793.3	834.4	861.9	879.2	885.4
132.5°	579.5	648.7	708.9	761.0	801.8	829.2	845.0	851.6
135°	551.8	610.2	664.7	712.4	748.6	776.2	791.9	798.2
137.5°	528.8	576.4	622.0	662.6	694.9	719.8	734.2	740.5
140°	515.5	555.9	595.6	631.1	661.5	683.3	696.3	701.5
142.5°	504.1	538.5	572.6	603.3	629.3	647.9	660.4	664.9
145°	490.2	516.2	542.2	564.9	585.0	599.7	609.6	614.0
147.5°	478.1	498.5	517.8	534.3	549.9	561.2	566.7	568.8
150°	471.4	488.8	503.7	518.2	530.3	540.1	543.5	544.6
152.5°	465.0	480.6	494.3	505.3	515.4	523.0	526.2	527.0
155°	455.7	468.3	479.3	488.0	495.8	501.4	503.7	504.5
157.5°	446.2	456.6	465.0	471.9	478.1	482.6	484.8	484.6
160°	439.8	447.7	455.7	461.1	466.7	470.6	472.2	471.4
162.5°	432.8	440.1	446.8	451.6	456.0	459.2	459.6	459.4
165°	423.2	428.8	433.5	437.5	440.6	442.2	442.2	442.2
167.5°	414.0	417.7	421.3	424.1	425.8	427.2	426.6	426.4
170°	409.0	411.4	413.7	415.4	416.9	417.7	417.7	416.9
172.5°	403.3	405.7	407.5	408.4	408.7	410.1	408.9	408.1
175°	397.2	397.2	398.8	398.8	398.8	399.5	398.0	397.2
177.5°	392.9	393.5	393.5	393.5	392.9	393.5	391.6	391.6
180°	391.6	391.6	391.6	391.6	391.6	391.6	391.6	391.6

(END OF REPORT)