

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: P333262-840

Luminaire Tested: **S125DIP-S1090D590U840-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333262-840  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-7,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S125DIP-S1090D590U840-4F0-1E-UDD-D  
Description: DEFINE 5 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1090 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 590 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6695.4 lumens  
Efficiency: N/A  
Efficacy: 137.2 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: Semi-Direct

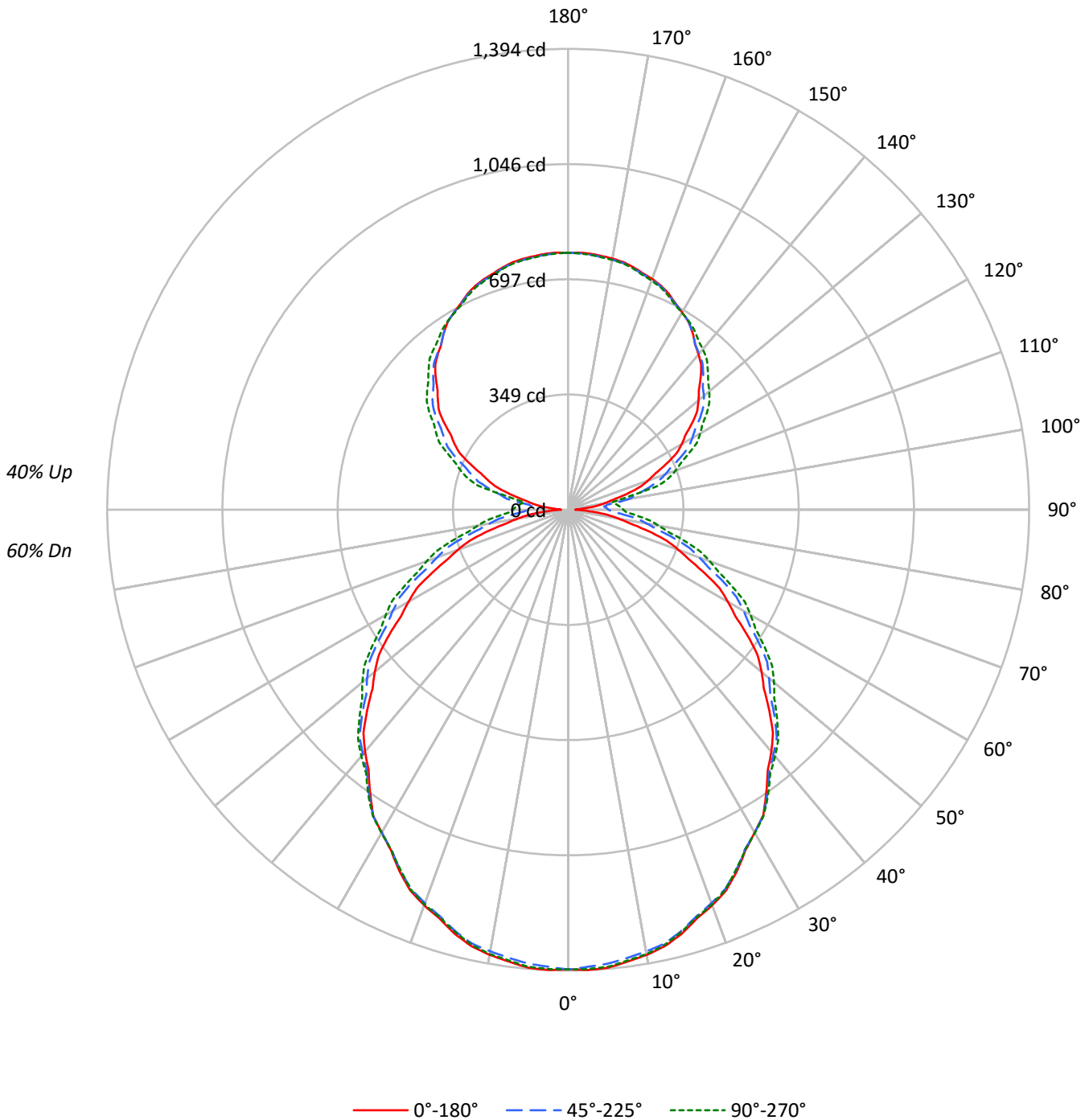
Input Watts (W): 48.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P333262-840

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### Luminous Intensity Polar Plot





TEST NUMBER: P333262-840

CATALOG NUMBER: S125DIP-S1090D590U840-4F0-1E-UDD-D

**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	110	110	110	110	102	102	102	102	89	89	89	77	77	77	66	66	66	60
1	99	94	90	86	92	88	85	81	77	74	71	66	64	62	57	55	54	49
2	90	82	75	70	84	77	71	66	67	62	58	58	54	51	49	47	45	40
3	82	72	64	58	76	67	60	55	59	53	49	51	47	43	43	40	38	34
4	75	63	55	49	70	59	52	46	52	46	41	45	40	37	39	35	32	29
5	69	56	48	42	64	53	45	40	46	40	36	40	36	32	35	31	28	25
6	63	51	42	36	59	48	40	34	42	36	31	36	31	28	31	28	24	22
7	58	46	37	32	54	43	35	30	38	32	27	33	28	24	29	25	22	19
8	54	41	33	28	51	39	32	27	35	29	24	30	25	22	26	22	19	17
9	51	38	30	25	47	36	29	24	32	26	22	28	23	20	24	20	17	15
10	47	35	27	22	44	33	26	21	29	24	20	26	21	18	23	19	16	14

**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	2.0
10°-20°	373.3	5.6
20°-30°	555.1	8.3
30°-40°	657.5	9.8
40°-50°	679.8	10.2
50°-60°	626.3	9.4
60°-70°	506.2	7.6
70°-80°	339.0	5.1
80°-90°	177.4	2.6
90°-100°	126.9	1.9
100°-110°	246.8	3.7
110°-120°	364.5	5.4
120°-130°	432.9	6.5
130°-140°	447.9	6.7
140°-150°	411.5	6.1
150°-160°	330.9	4.9
160°-170°	214.0	3.2
170°-180°	73.8	1.1
0°-30°	1059.9	15.8
0°-40°	1717.4	25.7
0°-60°	3023.5	45.2
0°-90°	4046.2	60.4
90°-120°	738.2	11.0
90°-150°	2030.4	30.3
90°-180°	2649.0	39.6
0°-180°	6695.4	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°	22	71	121	154	166	16
95°	51	84	109	140	151	56
105°	182	207	247	273	283	193
115°	326	340	375	396	402	323
125°	458	462	488	506	512	408
135°	567	569	577	593	597	437
145°	655	655	655	662	664	409
155°	720	717	718	719	715	332
165°	760	757	757	760	756	215
175°	777	774	774	778	774	74
180°	777	777	777	777	777	



TEST NUMBER: P333262-840

CATALOG NUMBER: S125DIP-S1090D590U840-4F0-1E-UDD-D

**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°	42.6	52.5	62.4	72.3	82.2	92.4	102.9	113.4	123.9	134.3	141.5
90°	22.4	33.1	43.8	54.5	65.2	76.2	87.5	98.7	109.8	121.0	128.7
92.5°	28.5	36.8	45.0	53.2	61.5	71.3	82.6	94.0	105.3	116.6	124.0
95°	50.6	58.1	65.5	73.0	80.5	86.9	92.4	97.9	103.3	108.8	116.0
97.5°	84.6	92.4	100.2	108.0	115.7	119.8	120.2	120.5	120.8	121.1	123.8
100°	111.2	118.0	124.7	131.5	138.3	146.6	156.9	167.1	177.3	187.5	194.8
102.5°	138.3	144.6	151.0	157.3	163.7	171.8	181.5	191.3	201.1	210.8	213.3
105°	181.7	187.0	192.4	197.7	203.1	210.4	219.4	228.5	237.6	246.7	252.8
107.5°	226.8	231.0	235.1	239.1	243.3	249.8	258.8	267.8	276.8	285.8	291.8
110°	256.1	259.7	263.4	267.0	270.6	276.9	285.6	294.4	303.1	311.8	317.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	284.7	287.9	291.1	294.4	297.6	303.4	311.7	320.1	328.6	337.0	341.9
115°	326.2	329.0	331.7	334.5	337.3	342.6	350.6	358.7	366.7	374.7	379.6
117.5°	369.2	370.6	371.9	373.3	374.7	379.3	387.3	395.3	403.1	411.1	415.6
120°	396.9	397.7	398.5	399.2	400.0	404.0	411.4	418.8	426.2	433.4	438.4
122.5°	420.2	421.1	422.0	422.9	423.8	427.8	434.6	441.6	448.5	455.3	460.0
125°	457.8	458.4	458.9	459.5	460.1	463.4	469.5	475.5	481.6	487.7	492.0
127.5°	492.4	492.8	493.1	493.4	493.8	496.4	501.3	506.2	511.1	515.9	520.2
130°	514.5	514.9	515.2	515.5	515.9	518.3	522.6	527.0	531.4	535.7	539.6
132.5°	535.6	536.3	536.9	537.7	538.4	540.2	543.2	546.1	549.2	552.1	556.3
135°	566.8	567.2	567.7	568.2	568.7	569.9	571.7	573.5	575.4	577.2	581.0
137.5°	595.4	595.8	596.3	596.7	597.1	597.7	598.5	599.4	600.2	601.0	604.6
140°	613.3	613.5	613.8	614.0	614.3	614.5	614.7	614.8	615.0	615.2	618.7
142.5°	630.3	630.3	630.2	630.1	630.0	630.1	630.3	630.5	630.8	631.0	633.9
145°	655.3	655.3	655.2	655.2	655.1	655.1	655.1	655.1	655.1	655.1	656.7
147.5°	675.8	675.8	675.7	675.7	675.6	675.7	675.8	676.0	676.1	676.3	676.9
150°	689.6	689.4	689.1	688.9	688.6	688.6	688.9	689.1	689.4	689.6	689.9
152.5°	703.1	702.5	702.0	701.4	700.7	700.6	700.8	701.1	701.4	701.7	702.0
155°	720.2	719.4	718.7	717.9	717.1	716.9	717.1	717.4	717.6	717.9	718.3
157.5°	733.5	733.0	732.6	732.1	731.6	731.4	731.4	731.4	731.4	731.5	732.0
160°	742.7	741.9	741.1	740.3	739.6	739.3	739.4	739.5	739.6	739.8	740.3
162.5°	750.0	749.3	748.5	747.7	747.0	746.7	746.8	746.9	747.0	747.2	747.9
165°	759.9	759.2	758.4	757.7	756.9	756.6	756.7	756.8	757.0	757.1	757.8
167.5°	767.3	766.6	765.8	765.0	764.2	763.9	764.0	764.1	764.2	764.4	765.3
170°	771.5	770.6	769.7	768.8	767.9	767.5	767.6	767.8	767.9	768.0	769.0
172.5°	774.3	773.4	772.4	771.5	770.6	770.3	770.5	770.8	771.0	771.2	772.1
175°	777.3	776.5	775.7	775.0	774.2	773.9	774.0	774.2	774.3	774.4	775.4
177.5°	778.6	778.0	777.4	776.8	776.2	775.9	776.0	776.1	776.2	776.3	777.1
180°	777.3	777.3	777.3	777.3	777.3	777.3	777.3	777.3	777.3	777.3	777.3



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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°	148.6	155.6	162.7	167.3	169.6	171.8	174.0	176.2
90°	136.2	143.8	151.5	156.5	159.0	161.5	164.0	166.5
92.5°	131.4	138.8	146.1	151.0	153.2	155.5	157.8	160.2
95°	123.3	130.7	137.9	142.7	144.8	146.9	149.1	151.2
97.5°	126.5	129.3	132.1	134.4	136.5	138.6	140.7	142.7
100°	162.1	149.4	136.6	131.0	132.2	133.5	134.8	136.1
102.5°	215.8	218.3	220.9	218.6	211.8	204.9	197.9	191.1
105°	258.8	264.9	270.9	275.0	276.9	278.9	280.9	282.9
107.5°	297.8	303.9	309.8	313.7	315.1	316.6	318.1	319.6
110°	322.6	327.9	333.4	337.1	339.4	341.6	343.9	346.1





TEST NUMBER: P333262-840

CATALOG NUMBER: S125DIP-S1090D590U840-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	347.0	352.0	357.1	360.5	362.5	364.5	366.4	368.3
115°	384.6	389.5	394.5	397.4	398.5	399.5	400.6	401.6
117.5°	420.1	424.5	429.1	432.1	433.8	435.6	437.4	439.1
120°	443.2	448.2	453.0	456.1	457.3	458.5	459.6	460.8
122.5°	464.7	469.4	474.0	476.9	478.0	479.0	480.1	481.2
125°	496.3	500.7	505.0	507.8	508.9	510.0	511.2	512.3
127.5°	524.4	528.6	532.8	535.3	536.1	536.9	537.8	538.6
130°	543.5	547.3	551.2	553.5	554.4	555.3	556.1	557.0
132.5°	560.5	564.6	568.8	571.2	571.8	572.5	573.1	573.7
135°	584.6	588.3	592.0	594.2	595.0	595.7	596.4	597.2
137.5°	608.2	611.8	615.4	617.5	618.0	618.6	619.1	619.8
140°	622.4	625.9	629.5	631.6	632.0	632.5	632.9	633.3
142.5°	636.8	639.6	642.6	644.3	644.7	645.1	645.6	646.0
145°	658.4	660.0	661.7	662.7	663.2	663.6	664.1	664.5
147.5°	677.6	678.2	678.8	679.0	678.6	678.2	677.8	677.5
150°	690.1	690.4	690.6	690.4	689.7	689.0	688.3	687.6
152.5°	702.2	702.5	702.7	702.4	701.6	700.6	699.8	698.9
155°	718.7	719.0	719.4	719.1	718.1	717.1	716.1	715.0
157.5°	732.4	732.8	733.2	732.9	731.8	730.7	729.7	728.7
160°	740.8	741.3	741.8	741.5	740.5	739.5	738.5	737.5
162.5°	748.6	749.3	750.0	749.8	748.7	747.6	746.5	745.3
165°	758.6	759.4	760.1	760.0	759.0	758.0	757.0	755.9
167.5°	766.2	767.1	768.0	767.9	766.8	765.6	764.5	763.3
170°	770.1	771.1	772.1	772.0	770.9	769.7	768.6	767.5
172.5°	773.1	774.1	775.0	774.9	773.7	772.5	771.3	770.2
175°	776.4	777.4	778.5	778.4	777.3	776.1	775.0	773.8
177.5°	777.8	778.5	779.2	779.1	778.3	777.5	776.7	775.9
180°	777.3	777.3	777.3	777.3	777.3	777.3	777.3	777.3

(END OF REPORT)