

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: P333434-927

Luminaire Tested: **S125DIW-S1090D470U927-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333434-927  
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: S125DIW-S1090D470U927-4F0-1E-UDD-F  
Description: DEFINE 5 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 1090 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 470 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5003.1 lumens  
Efficiency: N/A  
Efficacy: 108.3 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31  
Luminous Opening: Rectangular (W 0.42' x L: 4' x H: 0')  
CIE Type: Semi-Direct

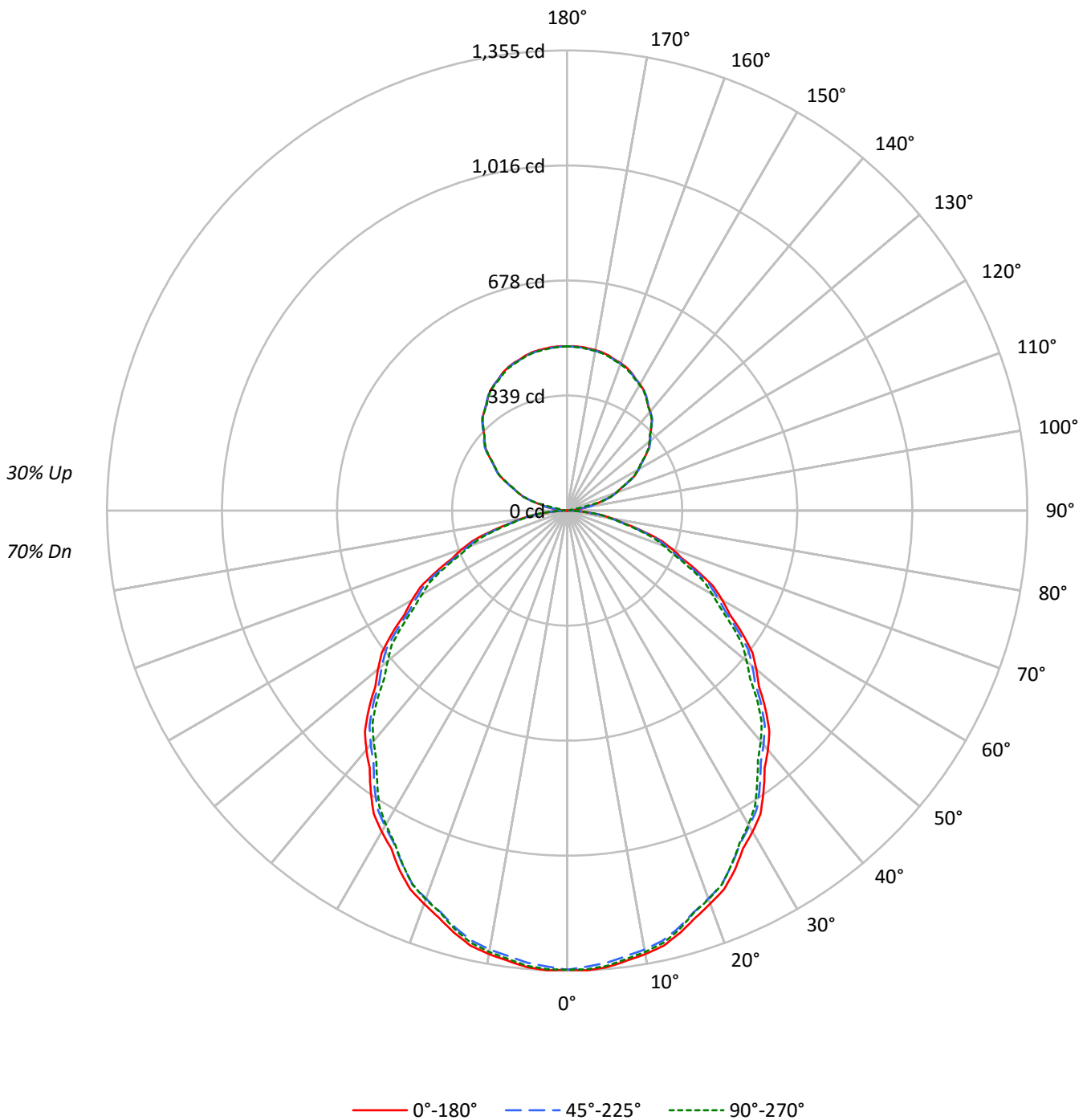
Input Watts (W): 46.2  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	106	106	106	106	95	95	95	84	84	84	75	75	75	70
1	102	98	94	90	97	93	89	86	83	80	78	74	72	70	66	64	63	59
2	93	85	79	74	88	81	75	70	73	68	64	65	62	59	58	55	53	49
3	85	75	67	61	80	71	64	59	64	59	54	58	53	50	51	48	45	42
4	78	67	58	52	73	63	56	50	57	51	46	51	46	42	46	42	39	36
5	71	59	51	45	67	57	49	43	51	45	40	46	41	37	41	37	34	31
6	66	53	45	39	62	51	43	38	46	40	35	42	36	32	38	33	30	27
7	61	48	40	34	58	46	39	33	42	36	31	38	33	29	34	30	27	24
8	57	44	36	30	54	42	35	29	38	32	28	35	30	26	32	27	24	22
9	53	40	32	27	50	39	31	26	35	29	25	32	27	23	29	25	22	20
10	50	37	30	25	47	35	29	24	33	27	22	30	25	21	27	23	20	18

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

	0°	45°	90°
0°	8730	8730	8730
5°	8749	8666	8722
10°	8697	8605	8655
15°	8602	8501	8538
20°	8467	8357	8372
25°	8322	8185	8177
30°	8143	7999	7959
35°	7950	7799	7689
40°	7754	7583	7474
45°	7541	7384	7237
50°	7306	7145	6931
55°	7080	6875	6683
60°	6810	6603	6368
65°	6487	6276	6062
70°	6180	5897	5695
75°	5629	5445	5255
80°	5013	4932	4813
85°	4357	4439	4194



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	127.5	2.5
10°-20°	360.0	7.2
20°-30°	531.6	10.6
30°-40°	620.3	12.4
40°-50°	623.0	12.5
50°-60°	546.9	10.9
60°-70°	407.5	8.1
70°-80°	233.0	4.7
80°-90°	68.8	1.4
90°-100°	17.6	0.4
100°-110°	108.3	2.2
110°-120°	196.4	3.9
120°-130°	252.0	5.0
130°-140°	271.1	5.4
140°-150°	254.4	5.1
150°-160°	205.8	4.1
160°-170°	133.1	2.7
170°-180°	45.9	0.9
0°-30°	1019.1	20.4
0°-40°	1639.4	32.8
0°-60°	2809.2	56.2
0°-90°	3518.5	70.3
90°-120°	322.2	6.4
90°-150°	1099.7	22.0
90°-180°	1485.0	29.7
0°-180°	5003.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1352	1352	1352	1352	1352	
5°	1350	1347	1337	1346	1345	128
15°	1286	1283	1272	1277	1277	362
25°	1168	1162	1149	1150	1148	537
35°	1008	1004	989	984	975	631
45°	826	821	808	796	792	636
55°	629	625	611	601	594	561
65°	424	422	411	401	397	421
75°	226	223	218	215	211	241
85°	59	60	60	59	57	66
90°	0	3	6	8	9	4
95°	20	19	6	7	8	26
105°	105	107	107	107	106	112
115°	198	200	200	198	196	196
125°	281	284	284	282	281	251
135°	351	353	352	351	349	270
145°	407	407	408	408	406	254
155°	448	446	447	447	445	206
165°	473	471	471	473	470	133
175°	484	481	482	484	481	46
180°	484	484	484	484	484	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1351.8	1351.8	1351.8	1351.8	1351.8	1351.8	1351.8	1351.8	1351.8	1351.8	1351.8
2.5°	1355.2	1354.6	1354.0	1353.4	1352.9	1351.6	1349.7	1347.8	1345.9	1344.0	1345.9
5°	1349.6	1349.2	1348.7	1348.2	1347.7	1346.3	1343.9	1341.6	1339.2	1336.8	1338.9
7.5°	1337.2	1336.7	1336.3	1335.8	1335.3	1333.7	1331.1	1328.5	1325.9	1323.3	1325.4
10°	1326.1	1325.6	1325.2	1324.7	1324.2	1322.6	1320.0	1317.4	1314.8	1312.2	1314.1
12.5°	1312.4	1311.5	1310.7	1309.8	1309.0	1307.3	1304.9	1302.5	1300.1	1297.6	1299.2
15°	1286.5	1285.8	1285.1	1284.4	1283.7	1282.0	1279.4	1276.8	1274.1	1271.5	1272.7
17.5°	1256.8	1255.8	1254.7	1253.6	1252.6	1250.7	1248.0	1245.3	1242.6	1239.8	1241.3
20°	1232.0	1231.5	1231.1	1230.6	1230.1	1228.3	1225.2	1222.1	1219.0	1215.9	1217.6
22.5°	1207.1	1206.3	1205.5	1204.6	1203.7	1201.8	1199.0	1196.0	1193.2	1190.3	1191.4
25°	1167.8	1166.6	1165.5	1164.3	1163.1	1160.9	1157.9	1154.8	1151.7	1148.6	1149.1
27.5°	1121.8	1121.1	1120.4	1119.7	1119.0	1117.1	1113.8	1110.6	1107.5	1104.3	1104.4
30°	1091.9	1091.2	1090.4	1089.7	1089.0	1086.9	1083.3	1079.7	1076.2	1072.6	1072.1
32.5°	1059.4	1058.3	1057.2	1056.1	1055.0	1052.9	1049.6	1046.5	1043.3	1040.1	1039.3
35°	1008.4	1007.5	1006.5	1005.6	1004.6	1002.5	999.2	995.9	992.5	989.2	988.0
37.5°	955.6	954.4	953.2	952.0	950.9	948.7	945.5	942.5	939.3	936.2	934.4
40°	919.7	918.5	917.3	916.2	915.0	912.7	909.3	906.0	902.7	899.4	897.2
42.5°	881.2	880.2	879.2	878.2	877.2	875.0	871.7	868.4	865.1	861.7	859.8
45°	825.6	824.7	823.7	822.8	821.8	819.9	817.1	814.2	811.4	808.5	805.6
47.5°	765.7	765.7	765.8	765.9	765.9	764.2	760.8	757.3	753.9	750.5	747.6
50°	727.2	726.5	725.8	725.1	724.4	722.5	719.7	716.8	714.0	711.1	708.1
52.5°	687.9	687.3	686.8	686.3	685.8	684.0	681.0	677.9	674.9	671.8	669.1
55°	628.8	628.1	627.4	626.7	626.0	623.9	620.6	617.3	613.9	610.6	608.5
57.5°	566.6	566.2	565.9	565.5	565.1	563.5	560.6	557.9	555.1	552.2	549.5
60°	527.2	526.2	525.3	524.3	523.4	521.7	519.0	516.4	513.8	511.2	508.8
62.5°	486.2	485.4	484.7	483.9	483.2	481.6	479.3	477.1	474.9	472.7	470.1
65°	424.5	424.1	423.6	423.1	422.6	421.1	418.5	415.9	413.3	410.7	408.5
67.5°	364.9	363.8	362.9	361.9	360.9	359.4	357.4	355.5	353.6	351.6	349.8
70°	327.3	326.1	324.9	323.7	322.5	320.8	318.7	316.6	314.4	312.3	310.9
72.5°	286.2	285.3	284.6	283.8	283.0	281.9	280.5	279.1	277.7	276.3	274.7
75°	225.6	225.1	224.7	224.2	223.7	222.9	221.7	220.5	219.4	218.2	217.5
77.5°	169.8	169.6	169.4	169.3	169.1	168.7	167.9	167.3	166.7	166.0	165.6
80°	134.8	134.8	134.8	134.8	134.8	134.5	134.0	133.6	133.1	132.6	132.4
82.5°	103.9	103.5	103.2	102.8	102.4	102.2	102.1	102.0	101.9	101.8	101.4
85°	58.8	59.0	59.3	59.5	59.7	59.9	59.9	59.9	59.9	59.9	59.7
87.5°	23.1	23.3	23.4	23.5	23.7	23.7	23.6	23.5	23.4	23.4	23.4
90°	0.4	1.0	1.7	2.3	2.9	3.5	4.0	4.6	5.1	5.7	6.1
92.5°	5.5	5.1	4.6	4.2	3.7	3.7	4.3	4.8	5.2	5.7	6.1
95°	20.4	20.2	20.0	19.7	19.5	17.8	14.8	11.8	8.8	5.7	6.1
97.5°	42.6	43.1	43.5	44.0	44.4	41.6	35.6	29.6	23.6	17.7	15.4
100°	59.8	60.1	60.4	60.6	60.8	61.1	61.4	61.7	62.0	62.3	50.5
102.5°	77.3	77.6	78.0	78.3	78.6	78.8	79.0	79.1	79.4	79.5	77.3
105°	105.4	105.7	106.0	106.3	106.6	106.8	106.8	106.8	106.8	106.8	106.8
107.5°	134.4	134.4	134.4	134.4	134.4	134.5	134.7	134.8	135.0	135.1	135.2
110°	153.4	153.4	153.4	153.4	153.4	153.4	153.6	153.8	153.9	154.1	153.8



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	171.2	171.3	171.5	171.7	171.9	172.1	172.1	172.3	172.4	172.5	172.1
115°	197.8	198.2	198.6	199.0	199.4	199.6	199.7	199.8	199.9	199.9	199.6
117.5°	225.5	225.4	225.4	225.4	225.4	225.5	225.8	226.1	226.4	226.7	226.3
120°	242.6	242.6	242.5	242.4	242.3	242.4	242.6	242.9	243.1	243.4	243.2
122.5°	257.9	258.1	258.4	258.7	259.0	259.2	259.4	259.4	259.6	259.7	259.5
125°	281.3	281.9	282.4	283.0	283.5	283.8	283.8	283.8	283.8	283.8	283.5
127.5°	303.7	304.2	304.6	305.0	305.4	305.5	305.5	305.5	305.4	305.3	305.1
130°	317.5	317.9	318.3	318.7	319.1	319.3	319.4	319.5	319.6	319.6	319.4
132.5°	331.3	331.8	332.2	332.6	333.1	333.3	333.1	333.0	332.7	332.6	332.6
135°	350.9	351.3	351.8	352.3	352.8	352.9	352.8	352.6	352.4	352.3	352.1
137.5°	368.8	369.2	369.6	370.1	370.5	370.7	370.5	370.3	370.2	370.0	370.1
140°	380.6	380.7	380.9	381.0	381.2	381.3	381.2	381.1	381.0	381.0	381.1
142.5°	391.2	391.3	391.4	391.5	391.6	391.7	391.8	391.9	392.1	392.1	392.1
145°	406.8	406.9	407.1	407.3	407.4	407.5	407.5	407.5	407.5	407.5	407.6
147.5°	420.4	420.3	420.3	420.3	420.3	420.3	420.4	420.5	420.6	420.6	420.7
150°	429.0	428.8	428.6	428.5	428.3	428.3	428.5	428.6	428.8	429.0	429.1
152.5°	437.3	437.0	436.6	436.3	435.9	435.8	435.9	436.1	436.3	436.4	436.6
155°	448.0	447.5	447.0	446.6	446.1	445.9	446.1	446.2	446.4	446.6	446.8
157.5°	456.2	455.9	455.7	455.3	455.0	455.0	455.0	455.0	455.0	455.0	455.3
160°	461.9	461.4	461.0	460.5	460.0	459.9	459.9	460.0	460.1	460.2	460.5
162.5°	466.5	466.0	465.6	465.1	464.6	464.5	464.5	464.6	464.7	464.8	465.2
165°	472.7	472.2	471.7	471.3	470.8	470.6	470.6	470.7	470.8	470.9	471.3
167.5°	477.3	476.8	476.3	475.8	475.3	475.1	475.2	475.2	475.3	475.4	476.0
170°	479.9	479.3	478.7	478.2	477.6	477.4	477.4	477.5	477.6	477.7	478.3
172.5°	481.6	481.0	480.5	479.9	479.3	479.2	479.3	479.4	479.6	479.7	480.3
175°	483.5	483.0	482.5	482.0	481.6	481.3	481.4	481.5	481.6	481.6	482.3
177.5°	484.3	483.9	483.5	483.2	482.8	482.6	482.7	482.8	482.8	482.9	483.3
180°	483.5	483.5	483.5	483.5	483.5	483.5	483.5	483.5	483.5	483.5	483.5



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1351.8	1351.8	1351.8	1351.8	1351.8	1351.8	1351.8	1351.8
2.5°	1347.8	1349.7	1351.6	1352.5	1352.3	1352.1	1351.9	1351.8
5°	1341.1	1343.2	1345.4	1346.3	1346.1	1345.8	1345.6	1345.4
7.5°	1327.5	1329.6	1331.7	1332.6	1332.4	1332.1	1331.9	1331.7
10°	1316.0	1317.9	1319.8	1320.6	1320.4	1320.2	1319.9	1319.7
12.5°	1300.7	1302.2	1303.7	1304.5	1304.4	1304.3	1304.3	1304.2
15°	1273.9	1275.1	1276.3	1276.9	1276.9	1276.9	1276.9	1276.9
17.5°	1242.9	1244.3	1245.8	1245.9	1244.8	1243.6	1242.4	1241.2
20°	1219.2	1220.9	1222.6	1222.8	1221.6	1220.4	1219.2	1218.1
22.5°	1192.5	1193.6	1194.6	1194.8	1194.0	1193.2	1192.4	1191.5
25°	1149.5	1150.0	1150.5	1150.3	1149.6	1148.9	1148.2	1147.5
27.5°	1104.5	1104.5	1104.7	1104.4	1103.7	1103.0	1102.2	1101.5
30°	1071.7	1071.2	1070.7	1070.2	1069.4	1068.7	1068.0	1067.3
32.5°	1038.4	1037.5	1036.7	1035.6	1034.4	1033.1	1031.7	1030.5
35°	986.8	985.6	984.4	982.9	981.0	979.1	977.2	975.3
37.5°	932.6	930.9	929.2	927.7	926.6	925.5	924.4	923.4
40°	895.1	892.9	890.8	889.4	888.7	888.0	887.2	886.5
42.5°	857.9	855.9	854.0	852.4	851.4	850.2	849.1	848.0
45°	802.8	799.9	797.1	795.3	794.6	793.8	793.1	792.4
47.5°	744.7	741.8	738.9	736.7	735.0	733.3	731.7	730.0
50°	705.0	701.9	698.8	696.4	694.7	693.1	691.4	689.8
52.5°	666.4	663.7	661.0	658.7	656.8	655.0	653.2	651.3
55°	606.3	604.2	602.1	600.2	598.5	596.8	595.2	593.5
57.5°	546.8	544.0	541.2	539.4	538.5	537.6	536.7	535.8
60°	506.4	504.1	501.7	499.6	498.0	496.3	494.6	493.0
62.5°	467.5	465.0	462.4	460.5	459.2	458.0	456.6	455.3
65°	406.4	404.3	402.1	400.5	399.6	398.6	397.7	396.7
67.5°	348.0	346.2	344.4	343.2	342.6	342.1	341.5	341.0
70°	309.4	308.0	306.6	305.4	304.4	303.5	302.5	301.6
72.5°	273.1	271.5	269.9	268.6	267.7	266.7	265.8	264.8
75°	216.7	216.0	215.3	214.4	213.5	212.5	211.6	210.6
77.5°	165.1	164.7	164.3	163.7	163.0	162.4	161.7	161.1
80°	132.1	131.9	131.7	131.3	130.8	130.3	129.8	129.4
82.5°	100.9	100.5	100.1	99.8	99.7	99.7	99.6	99.4
85°	59.4	59.2	58.9	58.5	58.1	57.6	57.1	56.6
87.5°	23.5	23.6	23.7	23.6	23.2	22.9	22.6	22.3
90°	6.5	6.9	7.3	7.7	7.9	8.2	8.4	8.6
92.5°	6.5	6.9	7.3	7.6	7.7	7.8	7.9	8.0
95°	6.5	6.9	7.3	7.5	7.5	7.5	7.5	7.5
97.5°	13.2	10.9	8.6	7.5	7.5	7.5	7.5	7.5
100°	38.7	26.8	14.9	8.8	8.5	8.2	7.8	7.5
102.5°	75.1	72.8	70.6	66.8	61.3	55.9	50.5	45.1
105°	106.8	106.8	106.8	106.8	106.7	106.6	106.5	106.5
107.5°	135.2	135.2	135.2	135.1	134.9	134.7	134.4	134.2
110°	153.6	153.4	153.1	153.0	153.1	153.2	153.3	153.4





TEST NUMBER: P333434-927

CATALOG NUMBER: S125DIW-S1090D470U927-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	171.8	171.5	171.3	171.0	171.0	170.8	170.7	170.6
115°	199.3	199.0	198.7	198.3	197.8	197.3	196.9	196.4
117.5°	225.9	225.5	225.1	224.7	224.5	224.3	224.1	223.9
120°	243.0	242.9	242.7	242.4	242.0	241.6	241.2	240.8
122.5°	259.4	259.2	259.0	258.7	258.3	257.8	257.4	256.9
125°	283.2	282.9	282.6	282.3	282.0	281.8	281.5	281.3
127.5°	305.0	304.8	304.7	304.3	303.6	303.1	302.5	301.9
130°	319.2	318.9	318.7	318.4	318.0	317.6	317.2	316.8
132.5°	332.5	332.4	332.4	332.2	331.8	331.4	331.0	330.6
135°	352.0	351.8	351.6	351.3	350.9	350.4	349.9	349.4
137.5°	370.1	370.2	370.2	370.0	369.6	369.2	368.8	368.4
140°	381.3	381.4	381.6	381.4	381.0	380.5	380.0	379.5
142.5°	392.2	392.2	392.3	392.1	391.6	391.1	390.6	390.1
145°	407.7	407.7	407.8	407.6	407.1	406.6	406.2	405.7
147.5°	420.9	421.0	421.0	420.8	420.3	419.7	419.1	418.5
150°	429.3	429.4	429.6	429.4	428.7	428.1	427.5	426.8
152.5°	436.7	436.9	437.0	436.9	436.3	435.7	435.1	434.6
155°	447.0	447.3	447.5	447.3	446.6	446.0	445.4	444.7
157.5°	455.5	455.7	456.0	455.8	455.2	454.6	453.9	453.3
160°	460.8	461.1	461.4	461.3	460.7	460.0	459.4	458.8
162.5°	465.6	466.1	466.5	466.4	465.7	465.0	464.3	463.6
165°	471.9	472.4	472.9	472.8	472.1	471.4	470.8	470.2
167.5°	476.6	477.1	477.7	477.7	476.9	476.2	475.5	474.8
170°	479.0	479.7	480.3	480.2	479.5	478.8	478.1	477.4
172.5°	480.9	481.4	482.0	482.0	481.3	480.5	479.8	479.1
175°	482.9	483.5	484.2	484.2	483.5	482.8	482.0	481.3
177.5°	483.8	484.2	484.7	484.7	484.1	483.6	483.1	482.6
180°	483.5	483.5	483.5	483.5	483.5	483.5	483.5	483.5

(END OF REPORT)