

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: P333432-940

Luminaire Tested: **S125DIW-S1090D470U940-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333432-940  
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-S1090D470U940-4F0-1E-UDD-D  
Description: DEFINE 5 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 1090 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 470 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5475.3 lumens  
Efficiency: N/A  
Efficacy: 118.5 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

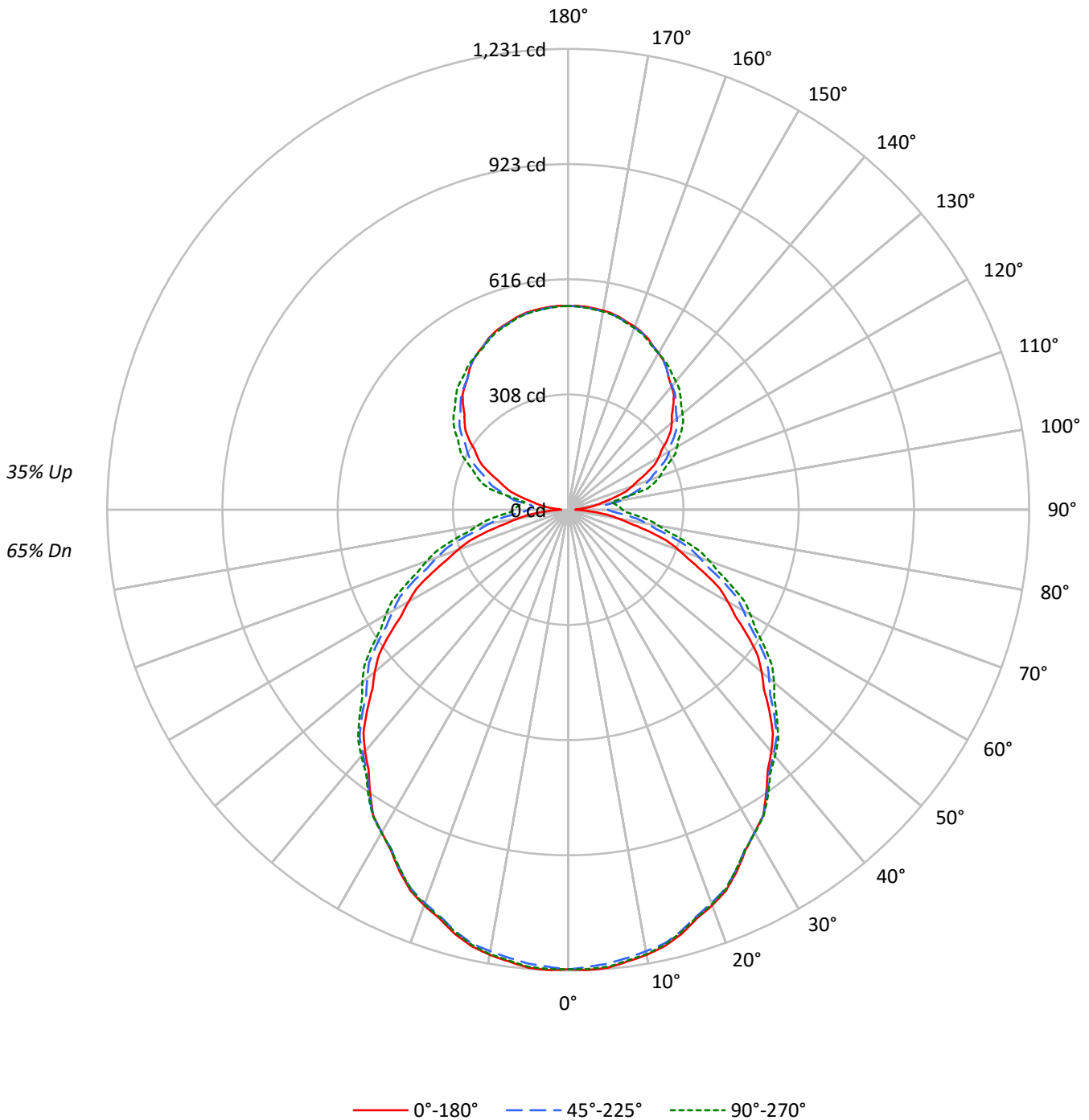
Input Watts (W): 46.2  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

RF	20				20				20				20				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	111	111	111	111	104	104	104	104	92	92	92	81	81	81	70	70	70	65
1	100	95	91	87	94	90	86	82	79	76	74	69	67	65	60	59	57	53
2	91	83	76	70	85	78	72	67	69	64	60	60	57	54	53	50	48	44
3	83	72	65	58	77	68	61	56	60	55	50	53	49	45	46	43	40	36
4	76	64	56	49	71	60	53	47	54	47	43	47	42	38	41	37	34	31
5	69	57	48	42	65	54	46	40	48	41	37	42	37	33	37	33	30	27
6	64	51	43	36	60	48	41	35	43	37	32	38	33	29	34	29	26	23
7	59	46	38	32	55	44	36	31	39	33	28	35	30	26	31	26	23	21
8	55	42	34	28	51	40	32	27	36	29	25	32	27	23	28	24	21	18
9	51	38	31	25	48	36	29	24	33	27	22	29	24	21	26	22	19	17
10	48	35	28	23	45	34	27	22	30	24	20	27	22	19	24	20	17	15

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

	0°	45°	90°
0°	7930	7930	7930
5°	7946	7783	7808
10°	7889	7644	7633
15°	7796	7478	7410
20°	7670	7273	7188
25°	7518	7053	6912
30°	7336	6810	6664
35°	7165	6588	6435
40°	6992	6353	6205
45°	6796	6152	6001
50°	6609	5935	5821
55°	6384	5729	5609
60°	6137	5495	5392
65°	5882	5250	5150
70°	5590	4914	4900
75°	5128	4592	4592
80°	4524	4201	4257
85°	3962	3938	4152



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	116.1	2.1
10°-20°	329.6	6.0
20°-30°	490.2	9.0
30°-40°	580.6	10.6
40°-50°	600.3	11.0
50°-60°	553.0	10.1
60°-70°	447.0	8.2
70°-80°	299.4	5.5
80°-90°	156.4	2.9
90°-100°	106.9	2.0
100°-110°	186.1	3.4
110°-120°	264.1	4.8
120°-130°	308.1	5.6
130°-140°	315.8	5.8
140°-150°	288.6	5.3
150°-160°	231.7	4.2
160°-170°	149.8	2.7
170°-180°	51.7	0.9
0°-30°	935.9	17.1
0°-40°	1516.5	27.7
0°-60°	2669.7	48.8
0°-90°	3572.5	65.2
90°-120°	557.1	10.2
90°-150°	1469.6	26.8
90°-180°	1903.0	34.8
0°-180°	5475.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1228	1228	1228	1228	1228	
5°	1228	1225	1217	1226	1226	116
15°	1172	1173	1165	1172	1168	330
25°	1065	1068	1062	1066	1060	490
35°	922	930	927	930	930	577
45°	760	772	779	787	788	586
55°	584	603	622	635	640	522
65°	402	430	459	476	482	399
75°	222	253	291	314	321	235
85°	66	106	148	174	184	70
90°	20	62	105	134	144	14
95°	39	68	94	122	131	42
105°	130	151	186	210	219	137
115°	230	242	272	291	297	228
125°	322	324	347	364	370	287
135°	397	399	406	420	425	306
145°	459	459	459	465	468	287
155°	504	502	503	504	501	232
165°	532	530	530	532	529	150
175°	544	542	542	545	542	52
180°	544	544	544	544	544	



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CATALOG NUMBER: S125DIW-S1090D470U940-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1227.9	1227.9	1227.9	1227.9	1227.9	1227.9	1227.9	1227.9	1227.9	1227.9	1227.9
2.5°	1230.7	1230.3	1229.8	1229.5	1229.0	1228.1	1226.5	1225.0	1223.6	1222.1	1223.6
5°	1227.9	1227.4	1226.8	1226.3	1225.7	1224.5	1222.6	1220.8	1218.9	1217.0	1219.1
7.5°	1217.0	1216.8	1216.6	1216.4	1216.2	1215.1	1213.2	1211.2	1209.3	1207.4	1209.2
10°	1207.4	1207.4	1207.4	1207.4	1207.4	1206.3	1204.2	1202.0	1199.9	1197.7	1199.6
12.5°	1193.9	1194.1	1194.4	1194.5	1194.8	1194.0	1192.3	1190.6	1188.9	1187.1	1188.7
15°	1172.5	1172.8	1173.0	1173.3	1173.6	1172.8	1170.9	1169.0	1167.2	1165.3	1166.9
17.5°	1144.5	1145.0	1145.6	1146.1	1146.7	1146.0	1144.2	1142.3	1140.4	1138.5	1139.8
20°	1124.4	1124.9	1125.4	1126.0	1126.5	1125.8	1123.9	1122.0	1120.2	1118.3	1119.1
22.5°	1101.2	1102.2	1103.1	1104.1	1105.1	1104.5	1102.4	1100.4	1098.2	1096.2	1097.2
25°	1065.3	1066.1	1066.9	1067.7	1068.5	1068.2	1066.6	1065.0	1063.4	1061.8	1062.8
27.5°	1025.4	1026.5	1027.7	1028.9	1030.1	1029.7	1028.0	1026.1	1024.3	1022.5	1023.2
30°	995.5	997.1	998.7	1000.3	1001.9	1001.9	1000.3	998.7	997.1	995.5	996.0
32.5°	968.6	969.9	971.3	972.8	974.1	974.2	973.0	971.9	970.7	969.6	970.1
35°	922.1	924.0	925.9	927.7	929.6	930.1	929.3	928.5	927.7	926.9	927.7
37.5°	875.7	877.4	879.0	880.7	882.4	883.2	883.0	882.7	882.4	882.2	883.2
40°	843.8	846.0	848.1	850.2	852.4	853.4	853.1	852.8	852.6	852.3	853.4
42.5°	809.1	812.0	814.8	817.5	820.3	822.0	822.6	823.1	823.8	824.4	825.6
45°	759.6	762.5	765.4	768.4	771.3	773.5	774.8	776.1	777.5	778.8	780.7
47.5°	708.8	711.5	714.3	716.9	719.7	722.2	724.5	726.8	729.2	731.4	734.1
50°	674.1	677.1	680.0	683.0	685.9	688.8	691.8	694.7	697.7	700.6	703.6
52.5°	637.5	641.1	644.7	648.3	651.8	655.4	659.1	662.6	666.2	669.8	673.0
55°	583.8	588.1	592.4	596.6	600.9	605.2	609.5	613.8	618.0	622.3	625.3
57.5°	529.0	534.0	539.2	544.4	549.5	554.6	559.5	564.4	569.3	574.2	577.6
60°	492.3	497.7	503.0	508.4	513.7	519.1	524.4	529.8	535.1	540.5	544.5
62.5°	456.7	462.1	467.4	472.8	478.1	483.7	489.5	495.3	501.1	506.8	511.2
65°	402.1	408.2	414.4	420.5	426.7	432.9	439.3	445.8	452.2	458.6	462.6
67.5°	350.5	356.5	362.4	368.4	374.3	380.5	387.1	393.6	400.1	406.6	411.5
70°	313.0	319.1	325.3	331.4	337.6	344.1	351.1	358.0	365.0	371.9	377.0
72.5°	276.4	282.8	289.1	295.5	301.8	308.8	316.5	324.0	331.6	339.2	344.7
75°	221.5	228.5	235.4	242.4	249.3	257.1	265.6	274.2	282.8	291.3	296.7
77.5°	168.8	176.8	184.9	192.9	200.9	209.0	217.2	225.5	233.7	241.9	247.8
80°	136.0	144.0	152.0	160.1	168.1	176.6	185.7	194.8	203.9	213.0	218.9
82.5°	106.2	114.6	123.1	131.5	140.0	148.8	158.2	167.5	176.8	186.1	191.8
85°	66.2	75.0	83.8	92.6	101.5	110.6	119.9	129.3	138.7	148.0	153.9
87.5°	37.6	46.4	55.0	63.8	72.5	81.4	90.6	99.9	109.1	118.3	124.6
90°	19.7	29.0	38.3	47.5	56.8	66.3	76.0	85.7	95.4	105.1	111.7
92.5°	23.5	30.9	38.3	45.8	53.2	61.9	71.7	81.6	91.5	101.3	107.7
95°	38.6	45.3	52.0	58.7	65.4	71.6	77.2	82.9	88.6	94.3	100.7
97.5°	62.2	68.9	75.7	82.5	89.2	93.5	95.6	97.6	99.7	101.7	104.8
100°	80.6	86.5	92.4	98.3	104.2	111.6	120.5	129.4	138.3	147.2	139.5
102.5°	99.3	104.9	110.4	115.9	121.5	128.5	137.1	145.6	154.2	162.7	165.6
105°	129.5	134.1	138.8	143.4	148.0	154.4	162.4	170.4	178.4	186.5	191.8
107.5°	160.8	164.3	168.0	171.7	175.3	181.0	189.0	196.8	204.7	212.6	217.9
110°	181.1	184.3	187.5	190.7	193.9	199.4	207.1	214.7	222.4	230.1	234.9



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	201.1	203.8	206.7	209.5	212.2	217.3	224.7	232.1	239.4	246.8	251.4
115°	229.9	232.2	234.5	236.8	239.2	243.9	250.9	258.0	265.0	272.1	276.5
117.5°	259.8	261.0	262.2	263.4	264.6	268.7	275.6	282.5	289.4	296.4	300.4
120°	279.1	279.8	280.5	281.2	282.0	285.5	291.9	298.4	304.8	311.2	315.6
122.5°	295.2	296.0	296.7	297.4	298.1	301.5	307.6	313.6	319.7	325.7	329.9
125°	321.5	321.8	322.2	322.5	322.9	325.7	331.1	336.4	341.8	347.1	351.1
127.5°	345.5	345.7	345.9	346.1	346.3	348.5	352.8	357.2	361.5	365.9	369.6
130°	361.1	361.2	361.4	361.6	361.8	363.7	367.6	371.4	375.2	379.1	382.5
132.5°	375.6	376.0	376.5	376.9	377.5	379.0	381.7	384.4	387.1	389.8	393.4
135°	397.3	397.6	397.9	398.1	398.4	399.4	401.1	402.8	404.5	406.2	409.5
137.5°	417.3	417.6	417.9	418.1	418.4	418.8	419.6	420.4	421.1	421.9	425.1
140°	429.6	429.8	430.0	430.2	430.3	430.5	430.7	430.9	431.1	431.2	434.4
142.5°	441.6	441.5	441.3	441.2	441.1	441.1	441.3	441.5	441.7	441.8	444.4
145°	459.1	459.0	458.9	458.8	458.7	458.7	458.7	458.7	458.7	458.7	460.1
147.5°	473.2	473.1	473.1	473.1	473.1	473.1	473.2	473.3	473.4	473.5	474.0
150°	482.9	482.7	482.5	482.3	482.1	482.1	482.3	482.5	482.7	482.9	483.0
152.5°	492.2	491.9	491.4	491.1	490.6	490.5	490.7	490.9	491.1	491.2	491.4
155°	504.3	503.7	503.2	502.7	502.1	501.9	502.1	502.3	502.5	502.7	502.9
157.5°	513.5	513.2	512.9	512.6	512.2	512.1	512.1	512.1	512.1	512.2	512.5
160°	520.0	519.4	518.9	518.4	517.8	517.6	517.7	517.8	517.9	518.0	518.4
162.5°	525.1	524.6	524.1	523.5	523.0	522.8	522.9	523.0	523.1	523.2	523.6
165°	532.1	531.5	531.0	530.5	529.9	529.7	529.8	529.9	529.9	530.0	530.6
167.5°	537.3	536.7	536.2	535.6	535.0	534.8	534.8	534.9	535.0	535.1	535.8
170°	540.2	539.6	538.9	538.2	537.6	537.3	537.4	537.5	537.6	537.7	538.4
172.5°	542.1	541.4	540.8	540.2	539.6	539.4	539.5	539.7	539.8	540.0	540.6
175°	544.2	543.7	543.1	542.6	542.1	541.8	541.9	542.0	542.1	542.2	542.9
177.5°	545.2	544.7	544.3	543.9	543.4	543.2	543.3	543.4	543.5	543.6	544.0
180°	544.2	544.2	544.2	544.2	544.2	544.2	544.2	544.2	544.2	544.2	544.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1227.9	1227.9	1227.9	1227.9	1227.9	1227.9	1227.9	1227.9
2.5°	1225.0	1226.5	1228.1	1228.7	1228.5	1228.2	1228.1	1227.9
5°	1221.3	1223.4	1225.6	1226.5	1226.3	1226.0	1225.7	1225.5
7.5°	1211.1	1213.0	1214.9	1215.7	1215.4	1215.1	1214.9	1214.6
10°	1201.5	1203.4	1205.2	1206.0	1205.8	1205.5	1205.2	1205.0
12.5°	1190.1	1191.5	1192.9	1193.3	1192.7	1191.9	1191.2	1190.5
15°	1168.5	1170.1	1171.7	1172.0	1170.9	1169.8	1168.8	1167.7
17.5°	1141.0	1142.2	1143.4	1143.7	1143.1	1142.5	1141.8	1141.2
20°	1119.9	1120.7	1121.5	1122.0	1122.0	1122.0	1122.0	1122.0
22.5°	1098.2	1099.2	1100.2	1100.4	1099.7	1099.1	1098.5	1097.9
25°	1063.9	1065.0	1066.0	1065.9	1064.5	1063.2	1061.8	1060.5
27.5°	1024.0	1024.8	1025.5	1025.6	1025.1	1024.7	1024.1	1023.7
30°	996.6	997.1	997.6	997.8	997.6	997.3	997.0	996.8
32.5°	970.6	971.2	971.7	971.8	971.5	971.3	971.0	970.7
35°	928.5	929.3	930.1	930.5	930.5	930.5	930.5	930.5
37.5°	884.3	885.4	886.4	886.9	886.8	886.7	886.5	886.4
40°	854.4	855.5	856.6	857.4	857.9	858.4	859.0	859.5
42.5°	826.9	828.2	829.5	830.2	830.3	830.4	830.5	830.6
45°	782.6	784.4	786.3	787.4	787.6	787.9	788.2	788.5
47.5°	736.9	739.6	742.3	744.0	744.6	745.2	745.7	746.4
50°	706.5	709.4	712.4	714.3	715.1	715.9	716.7	717.5
52.5°	676.1	679.2	682.4	684.3	684.8	685.5	686.1	686.6
55°	628.2	631.2	634.1	636.1	637.2	638.3	639.4	640.4
57.5°	580.9	584.3	587.7	589.8	590.6	591.4	592.2	593.0
60°	548.5	552.5	556.5	558.9	559.7	560.5	561.3	562.1
62.5°	515.7	520.1	524.6	527.3	528.3	529.3	530.3	531.4
65°	466.6	470.6	474.7	477.2	478.3	479.4	480.5	481.5
67.5°	416.3	421.2	426.1	429.3	430.6	432.0	433.4	434.8
70°	382.1	387.2	392.3	395.7	397.3	398.9	400.5	402.1
72.5°	350.3	355.8	361.2	364.6	365.8	366.9	368.1	369.3
75°	302.0	307.4	312.7	316.0	317.4	318.7	320.0	321.4
77.5°	253.7	259.6	265.5	268.9	270.0	271.1	272.2	273.2
80°	224.8	230.7	236.6	240.0	241.1	242.2	243.3	244.3
82.5°	197.4	203.1	208.7	212.6	214.5	216.4	218.4	220.3
85°	159.8	165.7	171.6	175.6	177.7	179.9	182.0	184.1
87.5°	130.8	137.1	143.3	147.3	149.3	151.2	153.1	155.1
90°	118.3	124.9	131.5	135.9	138.0	140.3	142.4	144.5
92.5°	114.0	120.5	126.9	131.1	133.0	135.0	137.1	139.0
95°	107.0	113.3	119.7	123.8	125.6	127.5	129.4	131.3
97.5°	107.9	110.9	114.0	116.5	118.3	120.1	122.0	123.8
100°	131.8	124.0	116.3	113.1	114.3	115.6	116.7	118.0
102.5°	168.5	171.4	174.2	173.4	169.0	164.4	160.0	155.5
105°	197.2	202.5	207.9	211.4	213.2	215.0	216.8	218.6
107.5°	223.2	228.5	233.9	237.2	238.6	240.0	241.4	242.7
110°	239.7	244.5	249.3	252.7	254.7	256.6	258.6	260.6





TEST NUMBER: P333432-940

CATALOG NUMBER: S125DIW-S1090D470U940-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	255.9	260.5	264.9	268.1	269.8	271.6	273.3	275.1
115°	281.0	285.4	289.9	292.7	293.7	294.8	295.9	296.9
117.5°	304.5	308.6	312.7	315.5	317.1	318.7	320.3	321.9
120°	319.9	324.3	328.7	331.4	332.6	333.8	334.9	336.1
122.5°	334.1	338.2	342.4	345.0	346.1	347.1	348.3	349.4
125°	355.0	358.9	362.8	365.3	366.4	367.5	368.5	369.6
127.5°	373.4	377.1	380.9	383.3	384.1	385.0	385.8	386.7
130°	386.0	389.5	393.0	395.2	396.1	397.0	397.9	398.8
132.5°	397.2	400.8	404.6	406.7	407.4	408.0	408.8	409.4
135°	412.8	416.1	419.4	421.4	422.2	423.0	423.8	424.6
137.5°	428.2	431.4	434.6	436.5	437.1	437.7	438.4	438.9
140°	437.5	440.6	443.7	445.5	446.0	446.6	447.1	447.6
142.5°	447.0	449.5	452.1	453.6	454.1	454.7	455.2	455.8
145°	461.5	463.0	464.4	465.4	465.9	466.5	467.0	467.5
147.5°	474.6	475.1	475.6	475.8	475.6	475.5	475.4	475.2
150°	483.2	483.4	483.6	483.5	483.0	482.6	482.1	481.7
152.5°	491.6	491.8	492.0	491.8	491.2	490.6	490.0	489.4
155°	503.2	503.5	503.7	503.5	502.7	502.0	501.3	500.6
157.5°	512.7	513.0	513.3	513.1	512.4	511.7	511.0	510.2
160°	518.7	519.1	519.4	519.2	518.5	517.8	517.1	516.4
162.5°	524.1	524.7	525.1	525.0	524.2	523.4	522.6	521.8
165°	531.2	531.7	532.3	532.2	531.5	530.7	529.9	529.2
167.5°	536.5	537.1	537.7	537.7	536.8	536.0	535.2	534.4
170°	539.1	539.9	540.6	540.6	539.8	539.0	538.1	537.3
172.5°	541.3	541.9	542.6	542.5	541.7	540.9	540.1	539.3
175°	543.6	544.3	545.0	545.0	544.2	543.4	542.6	541.8
177.5°	544.6	545.0	545.5	545.5	544.9	544.4	543.8	543.2
180°	544.2	544.2	544.2	544.2	544.2	544.2	544.2	544.2

(END OF REPORT)