

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: P333439-940

Luminaire Tested: **S125DIW-S1090D770U940-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333439-940  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-11,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S125DIW-S1090D770U940-4F0-1E-UDD-D1  
Description: DEFINE 5 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 1090 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 770 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6178.5 lumens  
Efficiency: N/A  
Efficacy: 115.3 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

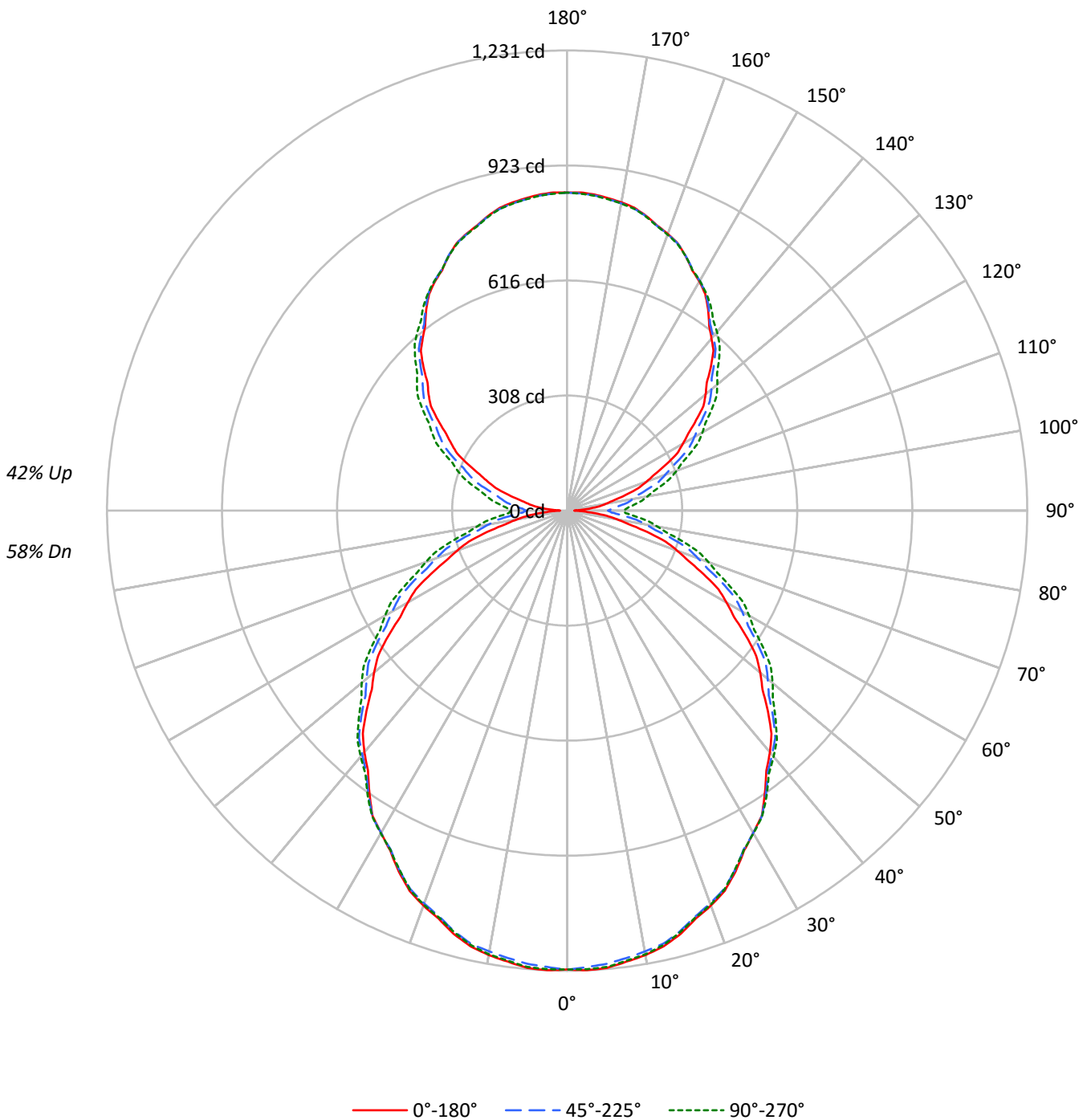
Input Watts (W): 53.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	109	109	109	109	102	102	102	102	88	88	88	75	75	75	63	63	63	58
1	99	94	90	86	92	88	84	80	76	73	70	65	63	61	55	53	52	47
2	90	82	75	69	83	76	70	65	66	61	58	56	53	50	48	45	43	39
3	81	71	64	57	75	67	60	54	58	52	48	50	45	42	42	39	36	32
4	74	63	55	48	69	59	52	46	51	45	41	44	39	36	37	34	31	27
5	68	56	48	41	63	53	45	39	46	40	35	39	35	31	33	30	27	24
6	63	50	42	36	58	47	40	34	41	35	30	36	31	27	30	27	24	21
7	58	45	37	31	54	43	35	30	37	31	27	32	27	24	28	24	21	18
8	54	41	33	28	50	39	31	26	34	28	24	30	25	21	25	22	19	16
9	50	38	30	25	47	35	28	24	31	25	21	27	22	19	23	20	17	15
10	47	35	27	22	44	33	26	21	29	23	19	25	20	17	22	18	15	13

**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	1.9
10°-20°	329.6	5.3
20°-30°	490.2	7.9
30°-40°	580.6	9.4
40°-50°	600.3	9.7
50°-60°	553.0	9.0
60°-70°	447.0	7.2
70°-80°	299.4	4.8
80°-90°	157.1	2.5
90°-100°	144.1	2.3
100°-110°	232.5	3.8
110°-120°	328.0	5.3
120°-130°	399.5	6.5
130°-140°	430.9	7.0
140°-150°	414.0	6.7
150°-160°	345.9	5.6
160°-170°	229.9	3.7
170°-180°	80.5	1.3
0°-30°	935.9	15.1
0°-40°	1516.5	24.5
0°-60°	2669.7	43.2
0°-90°	3573.2	57.8
90°-120°	704.6	11.4
90°-150°	1948.9	31.5
90°-180°	2605.0	42.2
0°-180°	6178.5	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	71
90°	20	64	109	139	151	15
95°	59	92	139	169	180	58
105°	162	185	224	251	263	173
115°	293	305	336	356	364	289
125°	421	425	449	466	472	377
135°	544	547	556	571	575	419
145°	657	659	661	666	670	410
155°	751	751	751	754	751	346
165°	816	815	816	818	814	230
175°	849	846	846	849	845	81
180°	851	851	851	851	851	



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**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°	37.7	46.5	55.3	64.1	72.9	81.9	91.2	100.5	109.9	119.1	125.5
90°	19.9	29.7	39.4	49.1	58.9	68.8	78.9	89.1	99.2	109.3	116.2
92.5°	33.3	42.1	50.8	59.6	68.3	77.9	88.5	99.2	109.7	120.3	127.2
95°	58.7	65.9	73.2	80.4	87.7	96.6	107.2	117.7	128.3	138.8	145.8
97.5°	85.7	92.1	98.4	104.9	111.2	119.8	130.6	141.4	152.2	163.0	169.6
100°	105.9	111.6	117.2	122.8	128.4	136.4	146.9	157.4	167.8	178.3	185.3
102.5°	127.7	133.5	139.3	145.1	150.9	158.4	167.7	177.0	186.4	195.6	202.5
105°	161.8	166.7	171.8	176.8	181.8	188.8	197.7	206.6	215.5	224.4	230.7
107.5°	199.5	203.8	208.2	212.6	217.0	223.4	231.8	240.1	248.5	256.9	262.6
110°	225.5	229.5	233.4	237.4	241.3	247.3	255.2	263.1	271.1	279.0	284.5



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	253.1	256.0	259.0	261.9	264.9	270.3	278.1	286.0	293.8	301.7	306.7
115°	292.6	295.0	297.5	299.9	302.4	307.2	314.5	321.7	329.0	336.3	340.9
117.5°	332.1	333.6	335.1	336.6	338.0	342.2	349.1	356.0	362.7	369.6	374.3
120°	357.5	359.1	360.6	362.1	363.6	367.6	373.9	380.2	386.5	392.8	397.3
122.5°	384.1	384.8	385.4	386.0	386.6	390.1	396.5	402.8	409.1	415.4	419.6
125°	421.2	421.8	422.4	423.0	423.7	426.7	432.2	437.7	443.2	448.7	452.7
127.5°	459.7	459.9	460.1	460.4	460.7	463.1	467.6	472.2	476.7	481.3	485.1
130°	483.6	484.0	484.5	484.9	485.4	487.7	491.7	495.7	499.8	503.8	507.4
132.5°	506.4	507.6	508.7	509.9	511.0	513.0	515.9	518.6	521.5	524.3	527.9
135°	543.9	544.5	545.1	545.7	546.4	547.7	549.7	551.7	553.8	555.7	559.2
137.5°	579.2	579.8	580.4	581.0	581.7	582.6	583.9	585.1	586.3	587.5	590.8
140°	600.9	601.6	602.4	603.2	603.9	604.6	605.3	606.0	606.7	607.4	610.6
142.5°	623.8	624.1	624.6	624.9	625.4	625.8	626.4	627.1	627.7	628.3	631.0
145°	657.2	657.5	657.8	658.2	658.5	658.9	659.3	659.8	660.2	660.7	662.0
147.5°	687.0	687.3	687.6	688.0	688.3	688.6	688.9	689.3	689.6	690.0	690.8
150°	707.7	707.5	707.3	707.2	707.0	707.3	707.8	708.5	709.0	709.6	709.6
152.5°	724.6	724.8	725.0	725.2	725.4	725.6	725.9	726.1	726.3	726.6	726.9
155°	750.6	750.6	750.6	750.6	750.6	750.7	750.9	751.0	751.2	751.4	751.9
157.5°	774.0	773.6	773.3	773.0	772.7	772.6	772.8	772.8	773.0	773.2	773.7
160°	787.7	787.3	786.8	786.4	786.0	785.8	786.0	786.1	786.2	786.4	787.0
162.5°	800.0	799.6	799.2	799.0	798.6	798.4	798.5	798.5	798.5	798.6	799.3
165°	816.2	815.9	815.6	815.3	815.0	814.9	815.1	815.2	815.4	815.6	816.1
167.5°	830.0	829.4	828.8	828.2	827.6	827.3	827.3	827.3	827.3	827.3	828.2
170°	837.4	836.8	836.2	835.6	835.0	834.7	834.7	834.7	834.7	834.7	835.6
172.5°	842.7	842.0	841.5	840.9	840.3	840.0	840.0	840.0	840.0	840.0	840.9
175°	848.6	848.0	847.5	846.9	846.2	846.0	846.0	846.0	846.0	846.0	846.9
177.5°	851.7	851.2	850.7	850.2	849.8	849.5	849.4	849.3	849.2	849.0	849.7
180°	850.6	850.6	850.6	850.6	850.6	850.6	850.6	850.6	850.6	850.6	850.6



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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°	131.7	138.0	144.4	148.5	150.4	152.4	154.4	156.3
90°	123.1	129.9	136.9	141.4	143.7	146.1	148.4	150.7
92.5°	134.1	141.0	147.9	152.5	154.6	156.9	159.1	161.2
95°	152.7	159.6	166.5	171.0	173.2	175.4	177.5	179.7
97.5°	176.2	182.8	189.4	193.7	195.6	197.7	199.7	201.6
100°	192.2	199.1	206.1	210.5	212.4	214.3	216.2	218.1
102.5°	209.4	216.2	223.0	227.5	229.4	231.5	233.5	235.5
105°	236.8	243.1	249.3	253.6	255.9	258.2	260.6	262.9
107.5°	268.4	274.1	279.8	283.6	285.2	286.8	288.4	290.1
110°	290.1	295.6	301.1	304.7	306.5	308.2	309.9	311.7





TEST NUMBER: P333439-940

CATALOG NUMBER: S125DIW-S1090D770U940-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	311.7	316.8	321.9	325.3	326.9	328.5	330.1	331.7
115°	345.5	350.3	354.9	357.9	359.4	360.9	362.3	363.8
117.5°	379.0	383.6	388.3	391.3	392.4	393.7	394.9	396.2
120°	401.9	406.4	411.0	413.8	414.7	415.8	416.8	417.9
122.5°	423.8	428.0	432.3	435.0	436.0	437.2	438.4	439.5
125°	456.6	460.7	464.7	467.3	468.4	469.6	470.8	472.0
127.5°	488.9	492.8	496.5	499.1	500.3	501.6	502.8	504.1
130°	511.0	514.6	518.2	520.5	521.6	522.6	523.6	524.7
132.5°	531.5	535.1	538.7	540.9	541.6	542.2	543.0	543.7
135°	562.7	566.1	569.6	571.8	572.5	573.3	574.0	574.8
137.5°	594.2	597.5	600.9	602.7	603.1	603.4	603.7	604.0
140°	613.9	617.2	620.4	622.1	622.5	622.9	623.2	623.5
142.5°	633.6	636.3	639.1	640.6	640.9	641.2	641.6	641.9
145°	663.3	664.7	666.0	667.0	667.6	668.2	668.9	669.5
147.5°	691.6	692.4	693.1	693.3	692.8	692.2	691.7	691.2
150°	709.6	709.6	709.6	709.6	709.6	709.5	709.5	709.5
152.5°	727.3	727.6	728.0	727.9	727.5	726.9	726.5	726.0
155°	752.5	753.0	753.7	753.6	752.9	752.2	751.4	750.6
157.5°	774.4	774.9	775.5	775.3	774.4	773.4	772.4	771.4
160°	787.6	788.2	788.7	788.7	787.9	787.2	786.5	785.8
162.5°	800.0	800.7	801.4	801.4	800.5	799.6	798.8	797.9
165°	816.7	817.3	817.9	817.7	816.9	816.0	815.1	814.2
167.5°	829.1	830.0	830.8	830.8	829.9	829.0	828.1	827.2
170°	836.5	837.4	838.3	838.2	837.1	836.2	835.1	834.1
172.5°	841.8	842.7	843.6	843.6	842.7	841.7	840.8	839.9
175°	847.7	848.6	849.5	849.4	848.4	847.4	846.3	845.3
177.5°	850.4	851.1	851.9	851.8	851.0	850.2	849.4	848.5
180°	850.6	850.6	850.6	850.6	850.6	850.6	850.6	850.6

(END OF REPORT)