

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: P333384-840

Luminaire Tested: **S125DIW-S610D1050U840-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333384-840  
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: S125DIW-S610D1050U840-4F0-1E-UDD-D  
Description: DEFINE 5 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 610 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 1050 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6657.9 lumens  
Efficiency: N/A  
Efficacy: 147.3 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: Semi-Indirect

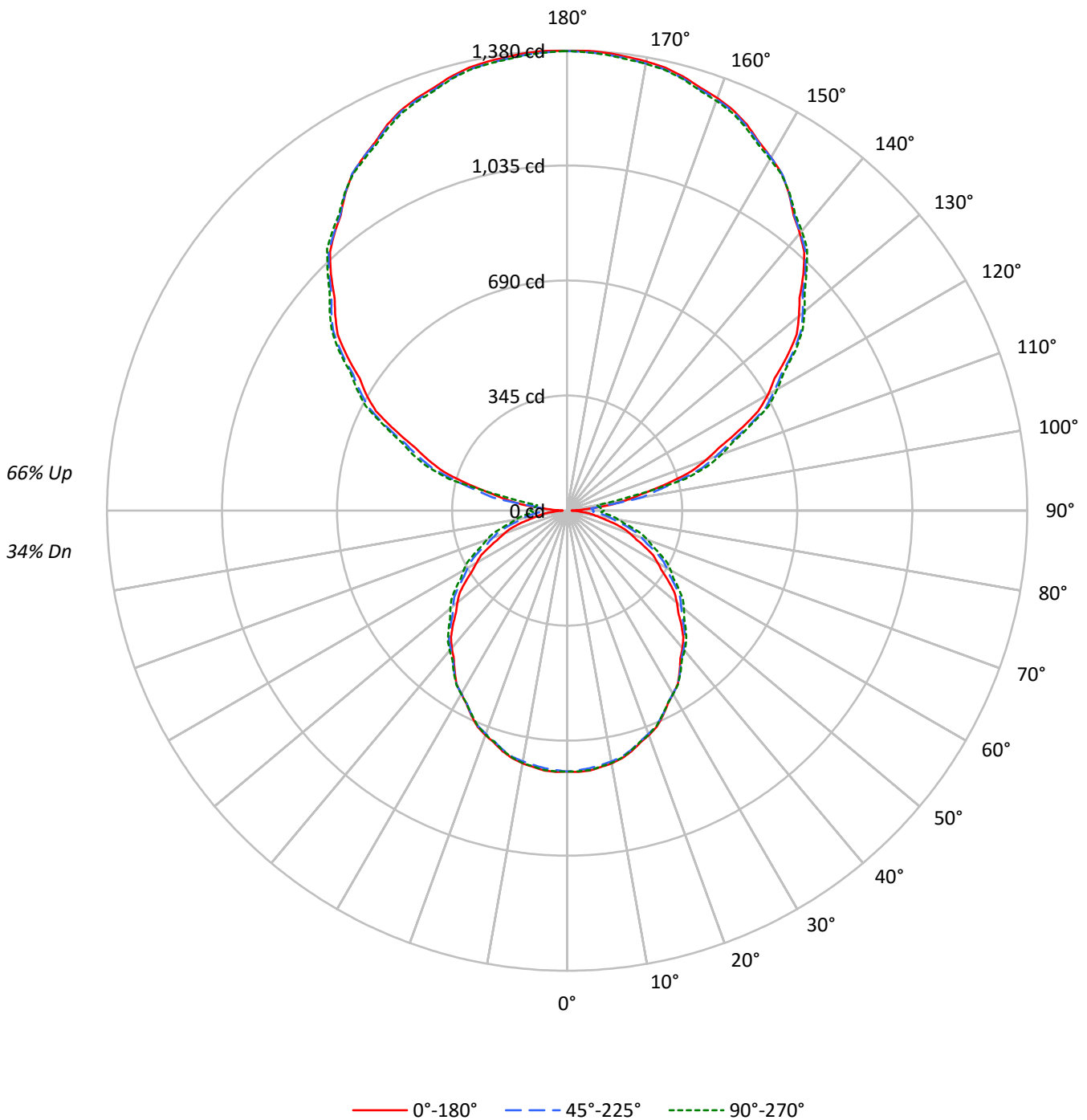
Input Watts (W): 45.2  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	103	103	103	103	93	93	93	93	75	75	75	57	57	57	42	42	42	34
1	94	89	85	82	84	81	77	74	64	62	60	50	48	47	36	35	34	28
2	85	78	71	66	76	70	65	60	56	52	49	43	41	39	31	30	28	23
3	77	68	61	55	70	62	55	50	49	45	41	38	35	32	28	26	24	19
4	71	60	52	46	63	54	48	42	44	39	35	34	30	28	25	22	20	16
5	65	53	45	39	58	48	41	36	39	34	30	30	27	24	22	20	18	14
6	60	48	40	34	53	43	36	31	35	30	26	27	23	21	20	17	15	12
7	55	43	35	30	49	39	32	27	32	26	23	25	21	18	18	16	14	11
8	51	39	31	26	46	35	29	24	29	24	20	22	19	16	17	14	12	10
9	47	35	28	23	43	32	26	21	26	21	18	21	17	14	15	13	11	9
10	44	32	25	20	40	29	23	19	24	19	16	19	15	13	14	12	10	8

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

	0°	45°	90°
0°	5054	5054	5054
5°	5064	4961	4977
10°	5029	4873	4865
15°	4969	4767	4723
20°	4888	4635	4581
25°	4792	4495	4406
30°	4676	4340	4247
35°	4567	4199	4102
40°	4457	4049	3955
45°	4331	3922	3825
50°	4213	3783	3710
55°	4069	3652	3575
60°	3913	3503	3437
65°	3749	3347	3282
70°	3561	3133	3123
75°	3269	2928	2928
80°	2884	2679	2713
85°	2526	2512	2645



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	74.0	1.1
10°-20°	210.1	3.2
20°-30°	312.4	4.7
30°-40°	370.1	5.6
40°-50°	382.6	5.7
50°-60°	352.5	5.3
60°-70°	284.9	4.3
70°-80°	190.8	2.9
80°-90°	101.8	1.5
90°-100°	105.6	1.6
100°-110°	349.5	5.2
110°-120°	587.1	8.8
120°-130°	733.8	11.0
130°-140°	779.3	11.7
140°-150°	726.5	10.9
150°-160°	586.6	8.8
160°-170°	379.4	5.7
170°-180°	130.8	2.0
0°-30°	596.5	9.0
0°-40°	966.6	14.5
0°-60°	1701.7	25.6
0°-90°	2279.2	34.2
90°-120°	1042.2	15.7
90°-150°	3281.9	49.3
90°-180°	4379.0	65.8
0°-180°	6657.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	783	783	783	783	783	
5°	783	781	776	781	781	74
15°	747	748	743	747	744	210
25°	679	681	677	679	676	312
35°	588	593	591	593	593	368
45°	484	492	496	502	503	373
55°	372	384	397	405	408	333
65°	256	274	292	303	307	254
75°	141	161	186	200	205	150
85°	42	68	94	111	117	45
90°	13	46	79	101	110	11
95°	68	83	72	93	100	82
105°	307	324	347	361	366	326
115°	568	579	600	609	608	563
125°	805	812	827	834	836	718
135°	1002	1007	1010	1017	1016	772
145°	1160	1161	1161	1166	1163	725
155°	1277	1271	1273	1275	1268	588
165°	1347	1341	1342	1347	1340	380
175°	1378	1372	1373	1380	1372	131
180°	1378	1378	1378	1378	1378	



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CATALOG NUMBER: S125DIW-S610D1050U840-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	782.6	782.6	782.6	782.6	782.6	782.6	782.6	782.6	782.6	782.6	782.6
2.5°	784.5	784.2	784.0	783.7	783.4	782.7	781.8	780.8	779.9	778.9	779.9
5°	782.6	782.2	781.9	781.6	781.2	780.5	779.3	778.1	776.9	775.7	777.1
7.5°	775.7	775.6	775.5	775.3	775.2	774.5	773.3	772.0	770.8	769.6	770.7
10°	769.6	769.6	769.6	769.6	769.6	768.9	767.5	766.2	764.8	763.5	764.7
12.5°	761.0	761.1	761.2	761.4	761.5	761.0	759.9	758.9	757.8	756.7	757.6
15°	747.3	747.5	747.7	747.8	748.0	747.5	746.3	745.1	744.0	742.8	743.8
17.5°	729.5	729.8	730.2	730.5	730.9	730.4	729.3	728.1	726.9	725.7	726.5
20°	716.6	717.0	717.3	717.7	718.0	717.6	716.4	715.2	714.0	712.8	713.3
22.5°	702.0	702.6	703.2	703.8	704.4	704.0	702.7	701.4	700.0	698.7	699.3
25°	679.0	679.5	680.0	680.5	681.1	680.9	679.8	678.8	677.7	676.7	677.4
27.5°	653.6	654.3	655.1	655.8	656.6	656.4	655.2	654.1	652.9	651.8	652.2
30°	634.5	635.6	636.6	637.6	638.6	638.6	637.6	636.6	635.6	634.5	634.9
32.5°	617.3	618.2	619.1	620.1	620.9	621.0	620.3	619.5	618.7	617.9	618.3
35°	587.7	589.0	590.2	591.3	592.5	592.9	592.4	591.8	591.3	590.8	591.3
37.5°	558.2	559.3	560.3	561.4	562.5	562.9	562.8	562.6	562.4	562.3	562.9
40°	537.9	539.3	540.6	542.0	543.3	543.9	543.7	543.6	543.4	543.2	543.9
42.5°	515.7	517.6	519.3	521.1	522.9	523.9	524.3	524.7	525.0	525.4	526.2
45°	484.1	486.0	487.9	489.8	491.7	493.0	493.9	494.7	495.5	496.4	497.7
47.5°	451.8	453.5	455.2	457.0	458.8	460.3	461.8	463.2	464.7	466.2	468.0
50°	429.7	431.5	433.4	435.4	437.2	439.1	440.9	442.8	444.6	446.6	448.5
52.5°	406.4	408.6	410.9	413.2	415.5	417.8	420.1	422.3	424.6	426.9	428.9
55°	372.1	374.9	377.6	380.3	383.0	385.8	388.5	391.2	393.9	396.7	398.6
57.5°	337.2	340.4	343.7	347.0	350.2	353.5	356.6	359.7	362.8	366.0	368.1
60°	313.9	317.2	320.6	324.1	327.5	330.8	334.3	337.7	341.1	344.5	347.1
62.5°	291.1	294.5	297.9	301.3	304.8	308.3	311.9	315.7	319.3	323.1	325.9
65°	256.3	260.2	264.1	268.0	272.0	276.0	280.0	284.2	288.2	292.4	294.9
67.5°	223.5	227.2	231.0	234.8	238.5	242.6	246.7	250.9	255.0	259.2	262.3
70°	199.4	203.4	207.3	211.3	215.2	219.3	223.8	228.2	232.7	237.1	240.3
72.5°	176.1	180.3	184.3	188.3	192.4	196.8	201.7	206.5	211.4	216.2	219.7
75°	141.2	145.6	150.1	154.5	159.0	163.9	169.4	174.8	180.3	185.7	189.0
77.5°	107.6	112.7	117.9	122.9	128.1	133.2	138.5	143.7	149.0	154.2	157.9
80°	86.7	91.8	96.9	102.1	107.1	112.6	118.5	124.2	130.0	135.8	139.6
82.5°	67.7	73.0	78.5	83.8	89.3	94.9	100.8	106.7	112.7	118.7	122.2
85°	42.2	47.9	53.4	59.1	64.7	70.5	76.4	82.4	88.4	94.4	98.2
87.5°	24.1	30.0	35.7	41.6	47.5	53.4	59.5	65.6	71.7	77.9	82.0
90°	13.3	20.6	27.9	35.1	42.4	49.7	57.1	64.5	71.9	79.3	84.3
92.5°	26.8	30.6	34.3	38.1	41.9	47.5	54.7	62.1	69.5	76.9	81.7
95°	68.2	71.9	75.7	79.5	83.2	83.6	80.8	78.0	75.1	72.3	77.3
97.5°	130.6	135.8	141.0	146.2	151.5	148.3	136.8	125.4	113.9	102.4	99.6
100°	179.0	183.3	187.5	191.8	196.0	201.4	207.7	214.1	220.5	226.8	196.6
102.5°	228.2	232.4	236.6	240.8	244.9	249.9	255.8	261.7	267.5	273.4	270.4
105°	307.2	310.8	314.5	318.1	321.7	326.1	331.2	336.3	341.4	346.6	350.0
107.5°	389.2	391.5	393.8	396.2	398.5	402.3	407.7	413.0	418.4	423.7	427.2
110°	442.5	444.5	446.6	448.7	450.7	454.3	459.6	464.7	470.0	475.2	477.8



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	493.2	495.3	497.6	499.7	501.9	505.4	510.4	515.2	520.2	525.1	527.4
115°	568.4	570.7	573.0	575.4	577.7	581.2	585.8	590.5	595.2	599.9	602.0
117.5°	646.3	647.0	647.7	648.4	649.2	652.1	657.2	662.3	667.3	672.4	674.1
120°	695.3	695.6	695.9	696.1	696.4	698.8	703.5	708.1	712.7	717.3	719.7
122.5°	738.0	739.1	740.2	741.2	742.4	745.0	749.1	753.2	757.3	761.4	763.7
125°	804.9	806.3	807.7	809.1	810.5	812.9	816.4	819.7	823.1	826.6	828.4
127.5°	868.0	869.0	869.9	870.9	871.8	873.6	876.4	879.0	881.6	884.3	886.4
130°	907.3	908.2	909.2	910.1	911.1	912.8	915.4	918.1	920.7	923.3	925.0
132.5°	945.8	947.2	948.4	949.7	951.0	952.3	953.6	954.9	956.3	957.7	959.9
135°	1001.5	1002.6	1003.8	1005.0	1006.2	1007.1	1007.9	1008.7	1009.4	1010.2	1011.9
137.5°	1052.6	1053.6	1054.6	1055.7	1056.7	1057.3	1057.5	1057.6	1057.8	1058.0	1060.2
140°	1085.4	1085.9	1086.3	1086.8	1087.2	1087.4	1087.4	1087.3	1087.3	1087.2	1089.5
142.5°	1115.7	1115.8	1115.9	1116.1	1116.2	1116.5	1116.8	1117.2	1117.5	1117.8	1119.5
145°	1160.0	1160.2	1160.5	1160.8	1161.1	1161.2	1161.2	1161.2	1161.2	1161.2	1162.4
147.5°	1198.0	1198.0	1197.9	1197.8	1197.7	1197.8	1198.0	1198.3	1198.6	1198.8	1199.4
150°	1222.5	1222.1	1221.6	1221.2	1220.7	1220.7	1221.2	1221.6	1222.1	1222.5	1223.0
152.5°	1246.3	1245.3	1244.3	1243.2	1242.2	1242.0	1242.4	1242.9	1243.3	1243.7	1244.3
155°	1276.7	1275.4	1273.9	1272.6	1271.2	1270.8	1271.2	1271.7	1272.1	1272.6	1273.2
157.5°	1300.2	1299.4	1298.6	1297.8	1296.9	1296.6	1296.6	1296.6	1296.7	1296.7	1297.5
160°	1316.6	1315.1	1313.8	1312.4	1311.1	1310.5	1310.7	1311.0	1311.2	1311.4	1312.3
162.5°	1329.6	1328.3	1326.9	1325.5	1324.1	1323.5	1323.8	1324.0	1324.2	1324.4	1325.8
165°	1347.2	1345.8	1344.4	1343.1	1341.7	1341.1	1341.4	1341.6	1341.8	1342.0	1343.4
167.5°	1360.2	1358.9	1357.5	1356.0	1354.6	1354.0	1354.2	1354.4	1354.7	1354.9	1356.6
170°	1367.6	1366.0	1364.4	1362.8	1361.2	1360.6	1360.8	1361.0	1361.2	1361.5	1363.3
172.5°	1372.5	1370.9	1369.3	1367.8	1366.1	1365.5	1365.9	1366.3	1366.8	1367.2	1368.8
175°	1377.8	1376.4	1375.0	1373.7	1372.3	1371.8	1372.0	1372.2	1372.5	1372.7	1374.5
177.5°	1380.3	1379.2	1378.1	1377.0	1375.9	1375.4	1375.6	1375.8	1375.9	1376.1	1377.5
180°	1377.8	1377.8	1377.8	1377.8	1377.8	1377.8	1377.8	1377.8	1377.8	1377.8	1377.8



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	782.6	782.6	782.6	782.6	782.6	782.6	782.6	782.6
2.5°	780.8	781.8	782.7	783.2	783.0	782.9	782.7	782.6
5°	778.4	779.8	781.1	781.7	781.6	781.4	781.2	781.1
7.5°	771.9	773.2	774.4	774.9	774.7	774.6	774.4	774.2
10°	765.9	767.0	768.2	768.7	768.6	768.4	768.2	768.0
12.5°	758.5	759.4	760.4	760.6	760.1	759.7	759.3	758.8
15°	744.8	745.8	746.8	747.0	746.3	745.6	745.0	744.3
17.5°	727.3	728.0	728.8	729.0	728.6	728.2	727.8	727.4
20°	713.9	714.4	714.9	715.1	715.1	715.1	715.1	715.1
22.5°	699.9	700.6	701.3	701.4	700.9	700.5	700.1	699.7
25°	678.1	678.8	679.4	679.4	678.5	677.7	676.8	676.0
27.5°	652.7	653.2	653.7	653.7	653.4	653.1	652.8	652.5
30°	635.2	635.6	635.9	636.0	635.8	635.6	635.5	635.3
32.5°	618.6	618.9	619.4	619.5	619.2	619.0	618.9	618.7
35°	591.8	592.4	592.9	593.1	593.1	593.1	593.1	593.1
37.5°	563.6	564.3	565.0	565.3	565.2	565.1	565.1	565.0
40°	544.6	545.3	545.9	546.4	546.8	547.1	547.5	547.9
42.5°	527.0	527.9	528.7	529.2	529.3	529.3	529.4	529.5
45°	498.8	500.0	501.2	501.9	502.1	502.2	502.4	502.6
47.5°	469.7	471.4	473.1	474.2	474.6	474.9	475.3	475.7
50°	450.3	452.2	454.0	455.2	455.8	456.3	456.8	457.3
52.5°	430.9	432.9	434.9	436.2	436.6	436.9	437.3	437.7
55°	400.4	402.3	404.1	405.5	406.2	406.9	407.5	408.2
57.5°	370.3	372.4	374.6	375.9	376.5	377.0	377.5	378.0
60°	349.6	352.1	354.8	356.3	356.8	357.3	357.8	358.3
62.5°	328.7	331.5	334.4	336.1	336.7	337.4	338.0	338.7
65°	297.4	300.0	302.6	304.2	304.9	305.6	306.2	306.9
67.5°	265.4	268.5	271.6	273.6	274.5	275.4	276.3	277.1
70°	243.6	246.8	250.0	252.2	253.2	254.2	255.3	256.3
72.5°	223.3	226.7	230.2	232.4	233.2	233.9	234.7	235.4
75°	192.5	195.9	199.3	201.5	202.3	203.2	204.0	204.9
77.5°	161.7	165.5	169.3	171.5	172.1	172.8	173.5	174.2
80°	143.3	147.0	150.8	153.0	153.7	154.4	155.1	155.7
82.5°	125.8	129.5	133.1	135.5	136.7	137.9	139.2	140.4
85°	101.9	105.6	109.4	111.9	113.3	114.6	116.0	117.3
87.5°	86.1	90.3	94.4	97.1	98.5	99.9	101.2	102.5
90°	89.4	94.4	99.5	102.9	104.8	106.7	108.6	110.5
92.5°	86.6	91.6	96.4	99.7	101.2	102.7	104.2	105.7
95°	82.1	87.1	91.9	94.9	96.1	97.4	98.6	99.7
97.5°	96.7	93.9	91.2	90.3	91.5	92.6	93.8	94.9
100°	166.3	136.1	105.8	90.8	90.9	91.1	91.2	91.3
102.5°	267.5	264.5	261.6	252.9	238.4	224.1	209.6	195.2
105°	353.4	356.8	360.2	362.4	363.3	364.4	365.3	366.3
107.5°	430.6	434.0	437.5	439.4	439.7	440.1	440.5	440.9
110°	480.4	482.9	485.4	487.5	488.9	490.3	491.7	493.1





TEST NUMBER: P333384-840

CATALOG NUMBER: S125DIW-S610D1050U840-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	529.6	531.8	534.0	535.6	536.4	537.3	538.3	539.1
115°	604.2	606.3	608.4	609.4	609.0	608.7	608.3	608.0
117.5°	675.8	677.5	679.2	680.3	681.0	681.5	682.1	682.7
120°	722.2	724.6	727.1	728.2	728.1	728.0	727.9	727.8
122.5°	766.0	768.3	770.6	771.6	771.3	771.0	770.7	770.4
125°	830.2	832.0	833.8	834.9	835.0	835.2	835.4	835.6
127.5°	888.4	890.4	892.4	893.0	892.4	891.7	891.0	890.3
130°	926.8	928.5	930.2	930.9	930.6	930.3	930.0	929.7
132.5°	962.1	964.4	966.6	967.6	967.1	966.7	966.3	965.8
135°	1013.6	1015.4	1017.1	1017.8	1017.3	1016.8	1016.2	1015.7
137.5°	1062.3	1064.3	1066.4	1067.2	1066.7	1066.2	1065.7	1065.2
140°	1091.9	1094.2	1096.5	1097.4	1096.7	1096.0	1095.3	1094.7
142.5°	1121.3	1123.0	1124.7	1125.2	1124.5	1123.8	1123.1	1122.5
145°	1163.5	1164.5	1165.6	1165.8	1165.1	1164.5	1163.8	1163.1
147.5°	1199.9	1200.5	1201.0	1200.6	1199.3	1198.0	1196.7	1195.4
150°	1223.5	1224.0	1224.4	1223.8	1222.1	1220.5	1218.8	1217.2
152.5°	1244.7	1245.2	1245.6	1245.1	1243.4	1241.8	1240.2	1238.6
155°	1273.9	1274.7	1275.4	1274.8	1272.9	1271.1	1269.3	1267.5
157.5°	1298.2	1298.9	1299.6	1299.1	1297.3	1295.5	1293.6	1291.8
160°	1313.2	1314.1	1315.0	1314.5	1312.8	1311.0	1309.2	1307.4
162.5°	1327.1	1328.3	1329.6	1329.2	1327.2	1325.2	1323.2	1321.2
165°	1344.7	1346.2	1347.5	1347.3	1345.4	1343.6	1341.8	1340.0
167.5°	1358.2	1359.8	1361.5	1361.3	1359.2	1357.2	1355.1	1353.1
170°	1365.1	1367.0	1368.8	1368.6	1366.5	1364.5	1362.5	1360.4
172.5°	1370.5	1372.1	1373.7	1373.5	1371.5	1369.4	1367.4	1365.3
175°	1376.3	1378.2	1380.0	1379.9	1377.8	1375.7	1373.7	1371.7
177.5°	1378.7	1380.0	1381.3	1381.2	1379.7	1378.3	1376.8	1375.3
180°	1377.8	1377.8	1377.8	1377.8	1377.8	1377.8	1377.8	1377.8

(END OF REPORT)