

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: P332771-927

Luminaire Tested: **S124DIW-S575D1560U927-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332771-927  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124DIW-S575D1560U927-4F0-1E-UDD-D  
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 1560 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6821.9 lumens  
Efficiency: N/A  
Efficacy: 112.6 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')  
CIE Type: Semi-Indirect

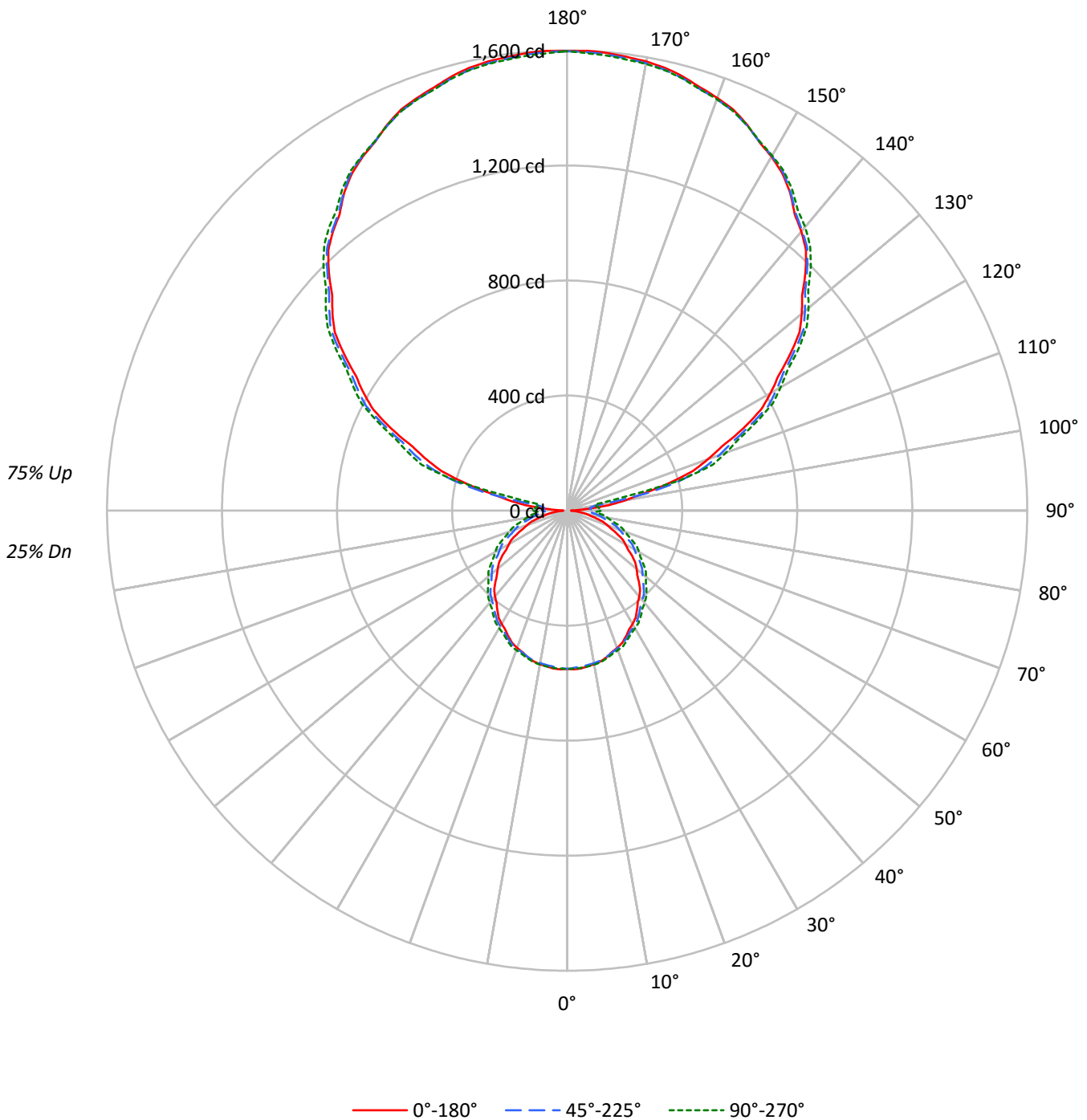
Input Watts (W): 60.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





TEST NUMBER: P332771-927

CATALOG NUMBER: S124DIW-S575D1560U927-4F0-1E-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	101	101	101	101	90	90	90	90	70	70	70	51	51	51	34	34	34	25
1	92	87	83	80	82	78	75	72	60	58	56	44	42	41	29	28	27	20
2	83	76	70	65	74	68	63	58	52	49	46	38	36	34	25	24	23	17
3	76	66	59	54	67	59	53	48	46	42	38	34	31	28	22	20	19	14
4	69	59	51	45	61	52	46	41	41	36	32	30	27	24	20	18	16	12
5	63	52	44	38	56	46	40	35	36	31	28	26	23	21	17	15	14	10
6	58	46	38	33	51	42	35	30	32	27	24	24	20	18	16	14	12	9
7	54	42	34	28	47	37	31	26	29	24	21	22	18	16	14	12	11	8
8	50	38	30	25	44	34	27	23	26	22	18	20	16	14	13	11	9	7
9	46	34	27	22	41	31	24	20	24	19	16	18	15	12	12	10	8	6
10	43	31	24	20	38	28	22	18	22	18	14	16	13	11	11	9	8	6

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

	0°	45°	90°
0°	4444	4444	4444
5°	4458	4343	4355
10°	4431	4273	4269
15°	4391	4190	4167
20°	4331	4099	4068
25°	4264	3998	3958
30°	4191	3896	3847
35°	4108	3792	3748
40°	4041	3694	3646
45°	3943	3603	3558
50°	3860	3498	3465
55°	3775	3400	3356
60°	3640	3274	3257
65°	3494	3139	3136
70°	3315	2985	2993
75°	3068	2814	2864
80°	2794	2652	2738
85°	2439	2507	2665



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	52.1	0.8
10°-20°	149.4	2.2
20°-30°	225.8	3.3
30°-40°	273.2	4.0
40°-50°	288.9	4.2
50°-60°	271.9	4.0
60°-70°	225.6	3.3
70°-80°	158.4	2.3
80°-90°	94.2	1.4
90°-100°	107.8	1.6
100°-110°	387.7	5.7
110°-120°	692.7	10.2
120°-130°	860.8	12.6
130°-140°	911.4	13.4
140°-150°	847.6	12.4
150°-160°	682.5	10.0
160°-170°	440.2	6.5
170°-180°	151.7	2.2
0°-30°	427.3	6.3
0°-40°	700.6	10.3
0°-60°	1261.3	18.5
0°-90°	1739.5	25.5
90°-120°	1188.2	17.4
90°-150°	3808.0	55.8
90°-180°	5082.0	74.5
0°-180°	6821.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	550	550	550	550	550	
5°	551	549	545	550	549	52
15°	528	529	527	532	532	149
25°	483	487	489	495	496	223
35°	423	430	436	445	447	265
45°	353	364	376	386	390	272
55°	276	289	308	319	324	246
65°	191	211	232	247	252	189
75°	106	129	155	171	178	113
85°	33	59	86	104	111	35
90°	14	51	87	111	120	10
95°	74	56	80	103	110	91
105°	365	385	413	436	402	382
115°	675	685	703	718	723	664
125°	946	951	964	978	984	845
135°	1172	1171	1180	1192	1198	903
145°	1351	1353	1354	1358	1363	844
155°	1480	1481	1478	1482	1479	682
165°	1561	1556	1555	1564	1554	441
175°	1597	1591	1591	1601	1588	152
180°	1597	1597	1597	1597	1597	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5
2.5°	552.5	552.2	551.8	551.4	551.1	550.6	549.7	548.8	547.9	547.0	547.8
5°	551.1	550.7	550.2	549.9	549.5	548.7	547.8	546.8	545.9	544.9	546.1
7.5°	546.4	546.1	545.9	545.7	545.4	544.9	544.2	543.4	542.5	541.7	543.0
10°	542.5	542.3	542.2	542.1	541.9	541.5	540.8	540.1	539.5	538.8	540.0
12.5°	537.0	537.0	537.0	536.9	536.9	536.7	536.2	535.8	535.3	534.8	535.9
15°	528.3	528.5	528.5	528.7	528.9	528.7	528.3	527.9	527.4	527.0	528.3
17.5°	516.3	516.7	517.1	517.5	518.0	518.2	518.1	518.0	517.9	517.8	519.0
20°	507.9	508.3	508.7	509.2	509.6	509.8	510.0	510.2	510.2	510.4	511.7
22.5°	498.6	499.1	499.6	500.1	500.7	501.1	501.3	501.5	501.8	502.0	503.4
25°	483.3	484.1	485.0	485.8	486.6	487.2	487.6	488.0	488.5	488.9	490.4
27.5°	466.3	467.5	468.7	469.9	471.1	472.0	472.6	473.2	473.9	474.5	475.9
30°	455.0	456.1	457.1	458.2	459.3	460.3	461.3	462.2	463.2	464.2	465.7
32.5°	442.6	443.9	445.2	446.6	447.9	449.1	450.1	451.2	452.3	453.4	455.0
35°	422.9	424.5	426.2	427.8	429.4	430.9	432.3	433.7	435.1	436.4	438.4
37.5°	403.1	404.9	406.8	408.7	410.6	412.4	414.1	415.8	417.5	419.1	421.1
40°	390.2	392.0	393.8	395.5	397.4	399.2	401.1	403.0	405.0	406.9	408.9
42.5°	375.4	377.4	379.4	381.4	383.4	385.6	387.8	390.0	392.3	394.5	396.8
45°	352.6	355.2	357.8	360.4	363.0	365.6	368.2	370.8	373.4	376.0	378.3
47.5°	330.8	333.4	336.1	338.8	341.5	344.4	347.4	350.4	353.4	356.4	358.9
50°	315.0	318.0	321.0	324.1	327.1	330.1	333.1	336.1	339.1	342.1	344.8
52.5°	299.2	302.2	305.2	308.2	311.2	314.5	318.0	321.4	324.9	328.3	331.1
55°	276.2	279.0	281.9	284.8	287.6	291.1	295.2	299.4	303.5	307.6	310.4
57.5°	250.4	254.0	257.5	261.1	264.7	268.5	272.5	276.6	280.7	284.8	288.0
60°	233.6	237.2	240.7	244.3	247.9	251.9	256.4	260.9	265.5	270.0	273.1
62.5°	217.4	221.3	225.1	229.0	232.9	237.1	241.6	246.1	250.7	255.2	258.3
65°	191.1	195.5	199.9	204.2	208.7	213.2	217.8	222.4	227.1	231.8	235.2
67.5°	165.8	170.5	175.2	179.8	184.4	189.3	194.2	199.2	204.2	209.2	212.7
70°	148.5	153.2	157.9	162.6	167.2	172.1	177.3	182.5	187.7	193.0	196.6
72.5°	131.8	136.6	141.3	146.1	150.8	156.0	161.5	167.1	172.6	178.2	181.7
75°	106.0	111.1	116.1	121.2	126.3	131.7	137.4	143.2	149.0	154.7	158.6
77.5°	82.0	87.4	92.8	98.1	103.5	109.2	115.2	121.2	127.2	133.2	137.1
80°	67.2	72.6	78.2	83.7	89.1	94.8	100.9	106.9	113.0	119.0	123.1
82.5°	52.4	58.1	63.8	69.5	75.2	81.0	87.1	93.1	99.1	105.2	109.4
85°	32.6	38.4	44.2	49.9	55.7	61.6	67.8	74.0	80.2	86.3	90.4
87.5°	18.9	25.1	31.3	37.5	43.6	50.0	56.4	62.8	69.2	75.7	79.9
90°	13.5	21.9	30.3	38.7	47.1	55.2	63.3	71.3	79.3	87.3	92.8
92.5°	24.4	29.5	34.6	39.7	44.8	51.3	59.3	67.3	75.4	83.4	88.9
95°	73.8	69.2	64.7	60.2	55.7	56.4	62.3	68.1	74.1	79.9	85.2
97.5°	146.8	156.3	165.9	175.4	184.9	177.6	153.5	129.4	105.4	81.4	85.1
100°	202.7	211.0	219.4	227.8	236.1	224.6	193.3	162.0	130.7	99.4	98.6
102.5°	265.8	272.4	279.0	285.7	292.3	295.8	296.3	296.8	297.2	297.6	252.5
105°	365.1	369.5	373.8	378.1	382.5	387.9	394.2	400.6	407.0	413.4	419.2
107.5°	458.4	461.4	464.5	467.5	470.6	475.4	482.0	488.6	495.2	501.8	506.4
110°	521.0	523.7	526.5	529.2	531.9	536.4	542.8	549.2	555.6	562.0	565.6



TEST NUMBER: P332771-927

CATALOG NUMBER: S124DIW-S575D1560U927-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	581.7	584.8	588.0	591.0	594.2	598.4	603.8	609.1	614.4	619.7	622.7
115°	675.1	677.1	679.1	681.2	683.2	686.3	690.4	694.5	698.6	702.7	706.3
117.5°	759.8	761.6	763.4	765.2	767.0	770.2	774.9	779.6	784.3	788.9	791.6
120°	816.7	818.1	819.6	821.0	822.5	825.1	828.9	832.5	836.2	840.0	843.2
122.5°	870.1	870.8	871.6	872.4	873.1	875.4	879.6	883.7	887.8	891.9	895.0
125°	946.3	947.1	948.1	949.0	949.9	951.8	954.7	957.7	960.5	963.5	966.8
127.5°	1018.7	1018.9	1019.0	1019.1	1019.2	1021.3	1025.1	1029.0	1032.8	1036.6	1038.9
130°	1065.1	1065.2	1065.3	1065.5	1065.6	1067.1	1070.2	1073.1	1076.1	1079.1	1081.8
132.5°	1108.1	1108.4	1108.7	1109.1	1109.5	1111.0	1113.7	1116.5	1119.3	1122.0	1124.7
135°	1172.0	1171.7	1171.5	1171.2	1170.9	1171.8	1173.9	1175.8	1177.9	1179.9	1182.6
137.5°	1229.1	1229.1	1229.0	1229.0	1229.0	1229.8	1231.4	1233.0	1234.7	1236.3	1238.9
140°	1266.4	1266.8	1267.2	1267.6	1268.0	1268.4	1269.2	1269.8	1270.5	1271.1	1273.7
142.5°	1299.3	1300.2	1301.2	1302.1	1303.1	1303.6	1303.9	1304.1	1304.3	1304.6	1306.7
145°	1350.6	1351.2	1351.9	1352.6	1353.2	1353.5	1353.5	1353.5	1353.5	1353.5	1354.6
147.5°	1391.4	1392.7	1394.1	1395.4	1396.9	1397.3	1397.1	1396.9	1396.5	1396.3	1396.6
150°	1421.0	1422.0	1422.9	1423.8	1424.7	1425.1	1424.8	1424.6	1424.3	1424.0	1424.0
152.5°	1445.4	1446.2	1447.1	1447.9	1448.7	1448.9	1448.3	1447.9	1447.4	1446.9	1447.4
155°	1480.2	1480.4	1480.7	1481.0	1481.2	1481.0	1480.2	1479.4	1478.6	1477.7	1478.8
157.5°	1509.6	1509.4	1509.3	1509.1	1508.9	1508.4	1507.4	1506.6	1505.7	1504.8	1506.2
160°	1526.8	1526.0	1525.2	1524.4	1523.6	1523.0	1522.7	1522.5	1522.3	1521.9	1523.6
162.5°	1542.1	1541.0	1540.0	1539.1	1538.0	1537.4	1537.1	1536.8	1536.6	1536.3	1537.9
165°	1561.4	1560.0	1558.8	1557.4	1556.1	1555.4	1555.4	1555.4	1555.4	1555.4	1557.5
167.5°	1576.7	1575.3	1573.9	1572.6	1571.1	1570.4	1570.3	1570.1	1569.9	1569.8	1572.1
170°	1585.3	1583.7	1582.1	1580.5	1578.9	1578.3	1578.5	1578.8	1579.1	1579.3	1581.4
172.5°	1591.0	1589.4	1587.9	1586.3	1584.7	1584.0	1584.3	1584.5	1584.8	1585.1	1587.1
175°	1597.2	1595.6	1594.0	1592.4	1590.9	1590.2	1590.5	1590.7	1591.0	1591.3	1593.6
177.5°	1600.1	1598.6	1597.1	1595.6	1594.2	1593.6	1594.0	1594.5	1594.9	1595.3	1597.0
180°	1597.2	1597.2	1597.2	1597.2	1597.2	1597.2	1597.2	1597.2	1597.2	1597.2	1597.2



TEST NUMBER: P332771-927

CATALOG NUMBER: S124DIW-S575D1560U927-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5
2.5°	548.6	549.3	550.1	550.4	550.3	550.2	550.1	550.0
5°	547.2	548.2	549.3	549.8	549.7	549.5	549.4	549.2
7.5°	544.2	545.4	546.7	547.2	547.1	546.9	546.8	546.7
10°	541.2	542.5	543.7	544.2	544.2	544.0	543.8	543.7
12.5°	537.1	538.2	539.3	539.9	539.9	539.8	539.8	539.8
15°	529.5	530.8	532.0	532.5	532.4	532.3	532.1	532.0
17.5°	520.3	521.6	522.8	523.4	523.3	523.2	523.1	523.0
20°	513.2	514.5	515.9	516.6	516.6	516.6	516.6	516.6
22.5°	504.8	506.1	507.5	508.3	508.5	508.7	509.0	509.2
25°	491.9	493.4	494.9	495.7	495.8	496.0	496.1	496.2
27.5°	477.4	478.7	480.1	480.9	481.1	481.3	481.4	481.6
30°	467.2	468.7	470.2	471.1	471.3	471.7	471.9	472.2
32.5°	456.8	458.5	460.3	461.2	461.5	461.8	462.1	462.3
35°	440.3	442.2	444.1	445.3	445.7	446.1	446.5	446.9
37.5°	423.1	425.0	427.0	428.2	428.6	429.0	429.4	429.9
40°	411.0	413.0	415.1	416.4	416.9	417.5	418.0	418.6
42.5°	399.1	401.3	403.6	405.0	405.4	405.8	406.3	406.7
45°	380.7	383.0	385.3	386.8	387.5	388.2	388.9	389.6
47.5°	361.2	363.7	366.1	367.7	368.5	369.3	370.2	371.0
50°	347.6	350.4	353.1	354.9	355.7	356.5	357.4	358.1
52.5°	333.8	336.5	339.3	341.0	341.9	342.7	343.5	344.4
55°	313.1	315.8	318.5	320.4	321.2	322.0	322.8	323.6
57.5°	291.3	294.6	297.9	299.8	300.6	301.3	302.1	302.9
60°	276.3	279.5	282.6	284.7	285.8	286.9	288.0	289.1
62.5°	261.5	264.7	267.8	269.9	271.0	272.1	273.2	274.3
65°	238.6	242.1	245.5	247.7	248.8	249.9	251.0	252.2
67.5°	216.2	219.7	223.2	225.4	226.5	227.5	228.6	229.7
70°	200.3	204.1	207.7	210.1	211.0	212.0	212.9	213.9
72.5°	185.3	188.9	192.5	194.8	195.9	196.9	198.0	199.1
75°	162.4	166.2	170.1	172.6	173.8	175.1	176.3	177.5
77.5°	141.1	145.0	148.9	151.5	152.7	154.1	155.3	156.7
80°	127.2	131.3	135.4	138.0	139.1	140.2	141.3	142.4
82.5°	113.6	117.8	122.1	124.8	126.0	127.1	128.3	129.6
85°	94.5	98.6	102.7	105.5	106.9	108.2	109.6	111.0
87.5°	84.2	88.6	92.8	95.6	97.0	98.2	99.6	100.8
90°	98.5	104.0	109.6	113.2	114.8	116.5	118.0	119.7
92.5°	94.3	99.7	105.2	108.5	109.7	111.0	112.2	113.4
95°	90.5	95.8	101.1	104.5	106.0	107.5	109.0	110.4
97.5°	88.9	92.6	96.3	98.9	100.4	101.8	103.3	104.7
100°	97.8	97.0	96.2	96.3	97.6	98.8	100.1	101.2
102.5°	207.5	162.3	117.2	95.3	96.4	97.5	98.6	99.7
105°	425.0	430.9	436.7	435.4	426.9	418.4	410.0	401.5
107.5°	510.9	515.5	520.0	523.2	525.2	527.2	529.3	531.2
110°	569.3	573.0	576.7	579.5	581.4	583.3	585.2	587.1





TEST NUMBER: P332771-927

CATALOG NUMBER: S124DIW-S575D1560U927-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	625.6	628.5	631.4	634.0	636.1	638.2	640.3	642.4
115°	709.9	713.4	716.9	719.1	720.2	721.1	722.1	723.0
117.5°	794.4	797.1	799.9	801.8	802.7	803.7	804.7	805.6
120°	846.4	849.8	853.0	854.9	855.5	856.1	856.7	857.2
122.5°	898.1	901.1	904.2	905.9	906.4	906.9	907.3	907.8
125°	970.2	973.6	977.0	979.3	980.3	981.4	982.5	983.6
127.5°	1041.2	1043.5	1045.9	1047.4	1048.1	1048.8	1049.6	1050.3
130°	1084.6	1087.3	1090.0	1091.8	1092.7	1093.4	1094.2	1095.1
132.5°	1127.3	1129.9	1132.5	1134.2	1134.8	1135.4	1136.0	1136.6
135°	1185.3	1188.0	1190.8	1192.8	1194.1	1195.5	1196.9	1198.3
137.5°	1241.4	1244.0	1246.7	1248.2	1248.7	1249.3	1249.7	1250.3
140°	1276.3	1278.9	1281.4	1283.2	1284.1	1285.1	1286.0	1287.0
142.5°	1308.8	1311.0	1313.1	1314.5	1315.2	1315.8	1316.4	1317.0
145°	1355.7	1356.8	1357.9	1359.0	1360.0	1361.1	1362.2	1363.3
147.5°	1396.9	1397.3	1397.6	1398.1	1398.8	1399.5	1400.2	1400.9
150°	1424.0	1424.0	1424.0	1424.2	1424.4	1424.7	1425.0	1425.2
152.5°	1447.8	1448.2	1448.7	1448.7	1448.6	1448.4	1448.3	1448.1
155°	1479.9	1481.0	1482.0	1482.2	1481.4	1480.6	1479.8	1479.0
157.5°	1507.5	1508.9	1510.3	1510.3	1508.9	1507.5	1506.2	1504.8
160°	1525.2	1526.8	1528.4	1528.4	1526.8	1525.2	1523.6	1521.9
162.5°	1539.5	1541.1	1542.7	1542.5	1540.8	1539.0	1537.2	1535.3
165°	1559.6	1561.8	1563.9	1563.8	1561.4	1559.0	1556.6	1554.3
167.5°	1574.5	1576.8	1579.1	1579.0	1576.3	1573.7	1571.0	1568.4
170°	1583.6	1585.7	1587.9	1587.5	1584.9	1582.2	1579.6	1576.9
172.5°	1589.3	1591.4	1593.6	1593.2	1590.3	1587.5	1584.6	1581.7
175°	1596.0	1598.5	1600.8	1600.4	1597.2	1594.0	1590.9	1587.7
177.5°	1598.7	1600.4	1602.1	1601.7	1599.2	1596.6	1594.0	1591.5
180°	1597.2	1597.2	1597.2	1597.2	1597.2	1597.2	1597.2	1597.2

(END OF REPORT)