

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: P332802-927

Luminaire Tested: **S124DIW-S795D1560U927-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332802-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIW-S795D1560U927-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1560 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6854.7 lumens
Efficiency: N/A
Efficacy: 100.7 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

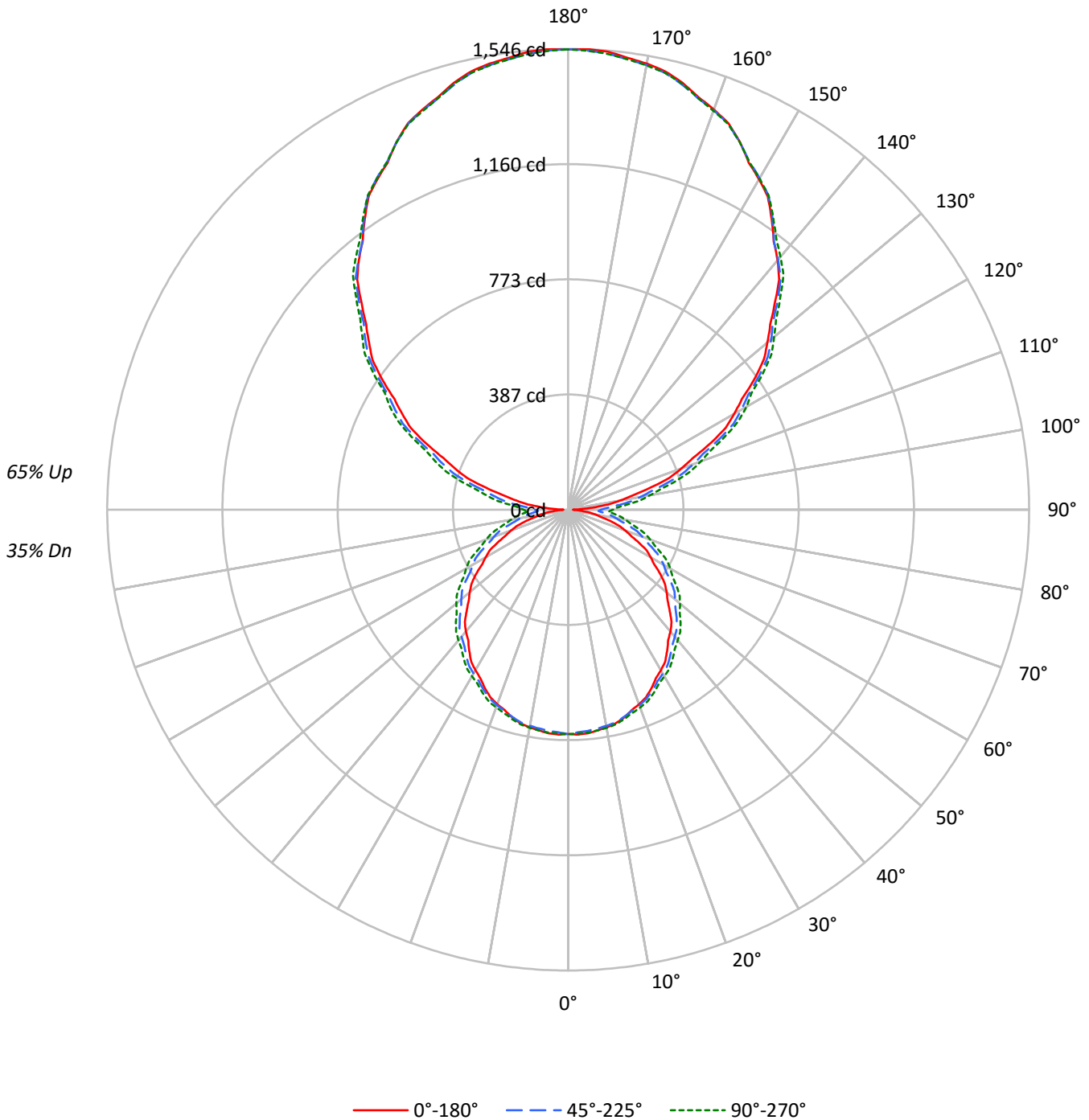
Input Watts (W): 68.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	58	58	58	42	42	42	35
1	94	89	85	81	84	81	77	74	64	62	60	50	48	47	36	35	34	28
2	85	77	71	66	76	70	65	60	56	52	49	43	41	38	31	30	28	23
3	77	68	60	54	69	61	55	50	49	44	41	38	35	32	27	25	24	19
4	70	60	52	46	63	54	47	42	43	38	34	34	30	27	24	22	20	16
5	65	53	45	39	58	48	41	36	39	33	29	30	26	23	22	19	17	14
6	59	47	39	33	53	43	36	31	35	29	25	27	23	20	20	17	15	12
7	55	43	35	29	49	39	32	27	31	26	22	24	21	18	18	15	13	10
8	51	38	31	26	46	35	28	24	28	23	20	22	18	16	16	14	12	9
9	47	35	28	23	42	32	25	21	26	21	17	20	17	14	15	13	11	8
10	44	32	25	20	40	29	23	19	24	19	16	19	15	13	14	11	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6075	6075	6075
5°	6093	5937	5954
10°	6056	5839	5835
15°	6002	5727	5695
20°	5920	5603	5561
25°	5828	5464	5411
30°	5728	5326	5258
35°	5615	5184	5124
40°	5525	5049	4984
45°	5391	4925	4864
50°	5277	4781	4738
55°	5160	4647	4588
60°	4976	4475	4453
65°	4776	4290	4285
70°	4532	4078	4091
75°	4196	3847	3915
80°	3817	3624	3742
85°	3344	3427	3643



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.3	1.0
10°-20°	204.2	3.0
20°-30°	308.7	4.5
30°-40°	373.5	5.4
40°-50°	394.9	5.8
50°-60°	371.6	5.4
60°-70°	308.3	4.5
70°-80°	216.6	3.2
80°-90°	127.0	1.9
90°-100°	174.6	2.5
100°-110°	355.6	5.2
110°-120°	548.3	8.0
120°-130°	695.7	10.1
130°-140°	767.3	11.2
140°-150°	747.1	10.9
150°-160°	626.9	9.1
160°-170°	417.1	6.1
170°-180°	146.1	2.1
0°-30°	584.1	8.5
0°-40°	957.6	14.0
0°-60°	1724.1	25.2
0°-90°	2376.1	34.7
90°-120°	1078.5	15.7
90°-150°	3288.6	48.0
90°-180°	4479.0	65.3
0°-180°	6854.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	752	752	752	752	752	
5°	753	751	745	751	751	71
15°	722	723	720	728	727	203
25°	661	666	668	677	678	304
35°	578	588	597	608	611	362
45°	482	498	514	528	532	372
55°	378	396	420	437	442	336
65°	261	288	317	337	345	259
75°	145	176	212	234	243	154
85°	45	80	118	142	152	48
90°	17	64	110	140	150	13
95°	83	121	164	189	198	88
105°	286	305	340	364	375	304
115°	526	534	558	575	580	519
125°	762	762	781	794	797	679
135°	980	987	993	1004	1006	758
145°	1189	1193	1194	1198	1198	744
155°	1362	1362	1360	1365	1360	626
165°	1482	1479	1476	1483	1479	418
175°	1542	1536	1535	1542	1535	146
180°	1544	1544	1544	1544	1544	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	752.5	752.5	752.5	752.5	752.5	752.5	752.5	752.5	752.5	752.5	752.5
2.5°	755.2	754.7	754.2	753.8	753.4	752.6	751.3	750.1	748.9	747.7	748.8
5°	753.3	752.7	752.2	751.6	751.1	750.1	748.8	747.5	746.2	744.9	746.4
7.5°	746.9	746.6	746.2	745.9	745.5	744.8	743.8	742.7	741.6	740.5	742.2
10°	741.5	741.3	741.2	740.9	740.8	740.2	739.3	738.3	737.4	736.4	738.2
12.5°	734.1	734.0	734.0	734.0	734.0	733.6	733.0	732.3	731.7	731.0	732.6
15°	722.2	722.3	722.5	722.7	722.9	722.7	722.2	721.6	721.0	720.4	722.2
17.5°	705.8	706.3	706.9	707.5	708.1	708.2	708.1	708.1	707.9	707.8	709.6
20°	694.3	694.9	695.5	696.0	696.6	697.0	697.1	697.3	697.5	697.7	699.6
22.5°	681.5	682.2	682.9	683.7	684.4	684.9	685.2	685.6	685.9	686.3	688.1
25°	660.6	661.7	662.9	664.0	665.1	666.0	666.5	667.1	667.7	668.2	670.3
27.5°	637.4	639.0	640.6	642.3	644.0	645.2	646.1	646.9	647.8	648.6	650.5
30°	621.9	623.4	624.9	626.4	627.9	629.2	630.6	631.8	633.2	634.5	636.5
32.5°	605.0	606.8	608.6	610.4	612.2	613.8	615.3	616.7	618.2	619.6	622.0
35°	578.1	580.3	582.6	584.8	587.0	589.1	591.0	592.9	594.7	596.6	599.2
37.5°	550.9	553.5	556.1	558.6	561.3	563.7	566.0	568.3	570.7	573.0	575.7
40°	533.4	535.8	538.2	540.7	543.1	545.7	548.3	550.9	553.5	556.1	559.0
42.5°	513.2	515.9	518.6	521.3	524.1	527.0	530.0	533.1	536.2	539.2	542.4
45°	482.0	485.5	489.1	492.7	496.2	499.8	503.4	506.9	510.4	514.0	517.2
47.5°	452.2	455.8	459.5	463.2	466.8	470.7	474.8	479.0	483.1	487.2	490.5
50°	430.6	434.7	438.8	442.9	447.0	451.1	455.3	459.4	463.5	467.6	471.4
52.5°	409.0	413.1	417.2	421.4	425.5	429.9	434.6	439.3	444.1	448.8	452.5
55°	377.5	381.4	385.4	389.3	393.2	398.0	403.6	409.2	414.9	420.5	424.2
57.5°	342.3	347.1	352.0	356.9	361.7	366.9	372.6	378.1	383.7	389.3	393.7
60°	319.3	324.2	329.1	334.0	338.8	344.4	350.5	356.7	362.9	369.1	373.4
62.5°	297.1	302.5	307.8	313.1	318.4	324.2	330.3	336.5	342.7	348.9	353.2
65°	261.2	267.2	273.2	279.2	285.2	291.4	297.7	304.1	310.5	316.8	321.5
67.5°	226.6	233.1	239.4	245.7	252.2	258.7	265.5	272.4	279.2	286.0	290.7
70°	203.0	209.5	215.8	222.2	228.5	235.3	242.4	249.5	256.6	263.7	268.8
72.5°	180.1	186.6	193.2	199.7	206.2	213.3	220.9	228.4	236.0	243.5	248.4
75°	145.0	151.9	158.8	165.7	172.6	180.1	187.9	195.7	203.7	211.5	216.7
77.5°	112.1	119.4	126.7	134.1	141.4	149.2	157.5	165.7	174.0	182.2	187.5
80°	91.8	99.3	106.8	114.3	121.8	129.7	137.9	146.2	154.4	162.6	168.3
82.5°	71.6	79.4	87.2	95.0	102.7	110.8	119.1	127.3	135.5	143.8	149.5
85°	44.7	52.5	60.4	68.3	76.1	84.3	92.7	101.1	109.6	118.0	123.6
87.5°	25.7	33.9	42.1	50.3	58.5	66.9	75.6	84.2	92.8	101.5	107.3
90°	17.0	27.5	37.9	48.3	58.7	69.0	79.1	89.4	99.5	109.7	116.7
92.5°	38.3	48.5	58.5	68.6	78.7	88.5	98.1	107.6	117.2	126.7	132.9
95°	82.6	91.2	99.7	108.3	116.9	126.0	135.5	145.0	154.6	164.1	169.9
97.5°	135.1	142.4	149.6	156.8	164.1	172.5	182.4	192.1	201.8	211.7	217.5
100°	176.5	182.4	188.4	194.3	200.2	208.0	217.7	227.4	237.1	246.8	252.4
102.5°	220.5	225.1	229.8	234.6	239.2	246.2	255.6	264.9	274.3	283.5	289.2
105°	285.9	289.9	293.9	297.9	301.9	307.9	315.9	323.9	331.9	339.9	345.4
107.5°	356.2	359.6	363.0	366.4	369.8	374.8	381.5	388.2	395.0	401.6	407.0
110°	403.3	406.5	409.6	412.7	415.9	420.6	426.9	433.2	439.5	445.8	449.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	452.3	454.8	457.2	459.6	462.0	466.1	471.9	477.7	483.5	489.3	493.3
115°	525.9	527.5	529.3	530.9	532.6	536.1	541.6	547.1	552.5	558.0	561.9
117.5°	595.9	597.1	598.3	599.6	600.8	604.0	609.3	614.4	619.6	624.9	627.9
120°	642.1	643.7	645.3	647.0	648.6	651.7	656.3	661.0	665.6	670.2	672.6
122.5°	690.8	691.3	691.9	692.4	692.9	695.6	700.4	705.1	709.9	714.6	717.5
125°	761.8	761.7	761.5	761.3	761.1	763.3	767.6	772.1	776.5	780.9	783.9
127.5°	826.9	827.5	828.1	828.8	829.3	831.2	834.4	837.6	840.7	843.9	846.8
130°	872.1	872.7	873.3	873.9	874.6	876.3	879.3	882.3	885.3	888.4	891.2
132.5°	918.9	919.3	919.7	920.1	920.5	921.8	924.0	926.2	928.4	930.6	933.3
135°	979.9	981.6	983.2	984.8	986.3	987.8	989.1	990.4	991.7	993.0	995.5
137.5°	1047.3	1047.9	1048.5	1049.0	1049.6	1050.4	1051.5	1052.5	1053.5	1054.6	1056.7
140°	1092.3	1092.6	1093.0	1093.3	1093.6	1093.9	1094.1	1094.2	1094.5	1094.6	1096.8
142.5°	1132.7	1133.1	1133.6	1134.2	1134.6	1134.7	1134.4	1134.1	1133.8	1133.5	1135.5
145°	1189.4	1190.3	1191.1	1192.0	1192.9	1193.4	1193.7	1194.0	1194.2	1194.5	1195.3
147.5°	1245.7	1246.8	1247.9	1249.0	1250.1	1250.5	1250.3	1250.1	1249.9	1249.7	1249.6
150°	1280.2	1281.0	1281.9	1282.8	1283.7	1284.0	1284.0	1284.0	1284.0	1284.0	1284.0
152.5°	1311.9	1312.6	1313.1	1313.8	1314.3	1314.8	1314.9	1315.2	1315.4	1315.6	1316.2
155°	1361.7	1361.7	1361.7	1361.7	1361.7	1361.6	1361.3	1361.0	1360.8	1360.5	1361.6
157.5°	1403.7	1403.3	1402.8	1402.3	1401.8	1401.6	1401.5	1401.4	1401.4	1401.4	1402.2
160°	1428.6	1428.3	1428.1	1427.8	1427.5	1427.3	1427.0	1426.7	1426.5	1426.2	1427.0
162.5°	1451.5	1450.9	1450.2	1449.5	1448.7	1448.3	1448.0	1447.8	1447.5	1447.2	1448.7
165°	1482.3	1481.5	1480.7	1480.0	1479.2	1478.5	1478.0	1477.4	1476.9	1476.4	1478.0
167.5°	1506.0	1504.9	1503.8	1502.7	1501.6	1501.0	1501.1	1501.1	1501.2	1501.3	1502.8
170°	1519.4	1518.1	1516.7	1515.4	1514.1	1513.5	1513.8	1514.1	1514.3	1514.6	1516.2
172.5°	1528.9	1527.8	1526.7	1525.6	1524.5	1523.9	1524.0	1524.1	1524.1	1524.2	1526.0
175°	1542.1	1540.7	1539.4	1538.1	1536.8	1536.0	1535.7	1535.4	1535.2	1534.9	1536.8
177.5°	1546.3	1545.3	1544.3	1543.2	1542.1	1541.6	1541.6	1541.6	1541.6	1541.6	1543.1
180°	1544.4	1544.4	1544.4	1544.4	1544.4	1544.4	1544.4	1544.4	1544.4	1544.4	1544.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	752.5	752.5	752.5	752.5	752.5	752.5	752.5	752.5
2.5°	749.8	750.9	751.9	752.4	752.3	752.1	751.9	751.8
5°	747.9	749.4	750.8	751.5	751.3	751.1	751.0	750.8
7.5°	743.9	745.5	747.3	748.0	747.8	747.6	747.4	747.3
10°	739.8	741.5	743.2	743.9	743.8	743.5	743.4	743.2
12.5°	734.1	735.7	737.2	737.9	737.9	737.8	737.8	737.8
15°	723.8	725.5	727.1	727.9	727.8	727.5	727.4	727.1
17.5°	711.2	713.0	714.7	715.5	715.3	715.2	715.0	714.9
20°	701.4	703.3	705.2	706.2	706.2	706.2	706.2	706.2
22.5°	690.0	691.8	693.7	694.8	695.1	695.4	695.7	696.0
25°	672.3	674.4	676.4	677.6	677.7	677.9	678.1	678.3
27.5°	652.4	654.3	656.3	657.4	657.6	657.8	658.1	658.2
30°	638.6	640.6	642.7	644.0	644.4	644.7	645.1	645.5
32.5°	624.4	626.8	629.1	630.5	630.8	631.2	631.6	632.0
35°	601.8	604.4	607.0	608.6	609.2	609.7	610.4	610.9
37.5°	578.3	581.0	583.6	585.3	585.8	586.5	587.0	587.6
40°	561.7	564.6	567.4	569.1	569.9	570.6	571.4	572.1
42.5°	545.5	548.6	551.7	553.6	554.1	554.8	555.4	556.0
45°	520.4	523.6	526.7	528.8	529.7	530.7	531.6	532.5
47.5°	493.8	497.1	500.4	502.6	503.7	504.9	506.0	507.1
50°	475.2	478.9	482.6	485.1	486.2	487.4	488.5	489.6
52.5°	456.3	460.0	463.7	466.2	467.3	468.4	469.5	470.7
55°	427.9	431.7	435.5	437.9	439.0	440.1	441.2	442.4
57.5°	398.2	402.7	407.1	409.9	410.9	411.9	413.0	414.1
60°	377.7	382.0	386.3	389.2	390.7	392.2	393.7	395.2
62.5°	357.4	361.8	366.1	369.0	370.5	372.0	373.4	374.9
65°	326.2	330.9	335.6	338.7	340.2	341.7	343.1	344.6
67.5°	295.5	300.2	305.0	308.1	309.6	311.0	312.5	313.9
70°	273.9	278.9	284.0	287.2	288.4	289.8	291.0	292.4
72.5°	253.3	258.3	263.2	266.3	267.8	269.3	270.7	272.2
75°	222.0	227.2	232.5	235.9	237.7	239.3	241.0	242.6
77.5°	192.8	198.1	203.4	207.0	208.8	210.6	212.4	214.2
80°	173.9	179.5	185.1	188.6	190.1	191.6	193.1	194.6
82.5°	155.3	161.1	166.8	170.6	172.1	173.8	175.5	177.1
85°	129.2	134.8	140.5	144.2	146.1	147.9	149.8	151.7
87.5°	113.0	118.7	124.5	128.3	130.0	131.7	133.5	135.2
90°	123.7	130.8	137.8	142.3	144.3	146.4	148.4	150.4
92.5°	139.2	145.4	151.6	155.7	157.5	159.3	161.1	163.0
95°	175.8	181.6	187.5	191.2	193.0	194.6	196.3	198.0
97.5°	223.4	229.3	235.1	238.8	240.4	242.1	243.7	245.3
100°	257.9	263.6	269.1	272.6	273.9	275.2	276.6	277.8
102.5°	294.9	300.5	306.2	309.8	311.5	313.1	314.8	316.5
105°	350.9	356.3	361.8	365.7	368.0	370.3	372.6	374.9
107.5°	412.3	417.7	423.0	426.4	427.7	429.0	430.2	431.6
110°	453.4	457.1	460.9	463.9	466.2	468.5	470.8	473.1



TEST NUMBER: P332802-927

CATALOG NUMBER: S124DIW-S795D1560U927-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	497.3	501.4	505.4	508.3	509.9	511.6	513.3	514.9
115°	565.7	569.6	573.5	575.8	576.9	578.0	579.0	580.0
117.5°	630.8	633.8	636.8	638.8	639.8	640.7	641.7	642.7
120°	675.1	677.5	679.9	682.1	684.1	686.2	688.2	690.2
122.5°	720.3	723.2	726.0	727.6	728.0	728.4	728.8	729.2
125°	787.0	790.0	793.0	794.8	795.4	796.0	796.6	797.2
127.5°	849.6	852.5	855.3	857.1	858.0	858.8	859.7	860.5
130°	894.0	896.8	899.7	901.1	901.2	901.3	901.3	901.4
132.5°	936.0	938.7	941.3	943.0	943.7	944.4	945.1	945.8
135°	998.0	1000.4	1002.9	1004.2	1004.6	1005.0	1005.3	1005.6
137.5°	1058.7	1060.7	1062.8	1064.4	1065.5	1066.5	1067.6	1068.7
140°	1099.0	1101.1	1103.4	1104.7	1105.4	1106.0	1106.8	1107.4
142.5°	1137.6	1139.6	1141.8	1143.1	1143.9	1144.6	1145.3	1146.1
145°	1196.2	1197.1	1197.9	1198.3	1198.3	1198.3	1198.2	1198.1
147.5°	1249.5	1249.5	1249.4	1249.6	1249.9	1250.2	1250.5	1250.9
150°	1284.0	1284.0	1284.0	1284.0	1283.7	1283.4	1283.2	1282.9
152.5°	1316.8	1317.5	1318.1	1318.1	1317.4	1316.8	1316.1	1315.3
155°	1362.6	1363.7	1364.8	1364.8	1363.7	1362.6	1361.6	1360.5
157.5°	1403.0	1403.7	1404.5	1404.5	1403.6	1402.7	1401.8	1400.9
160°	1427.8	1428.6	1429.4	1429.1	1427.8	1426.5	1425.1	1423.8
162.5°	1450.1	1451.5	1452.9	1453.0	1451.7	1450.4	1449.1	1447.7
165°	1479.6	1481.1	1482.7	1483.0	1481.9	1480.9	1479.8	1478.8
167.5°	1504.4	1506.0	1507.6	1507.6	1505.9	1504.3	1502.6	1500.9
170°	1517.8	1519.4	1521.0	1520.8	1519.0	1517.1	1515.3	1513.4
172.5°	1527.8	1529.5	1531.4	1531.4	1529.5	1527.6	1525.7	1523.9
175°	1538.7	1540.5	1542.4	1542.4	1540.5	1538.7	1536.8	1534.9
177.5°	1544.6	1546.0	1547.5	1547.4	1545.7	1544.0	1542.4	1540.6
180°	1544.4	1544.4	1544.4	1544.4	1544.4	1544.4	1544.4	1544.4

(END OF REPORT)