

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: P332761-830

Luminaire Tested: **S124DIW-S575D1050U830-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332761-830
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-S575D1050U830-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1050 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6302.1 lumens
Efficiency: N/A
Efficacy: 139.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Semi-Indirect

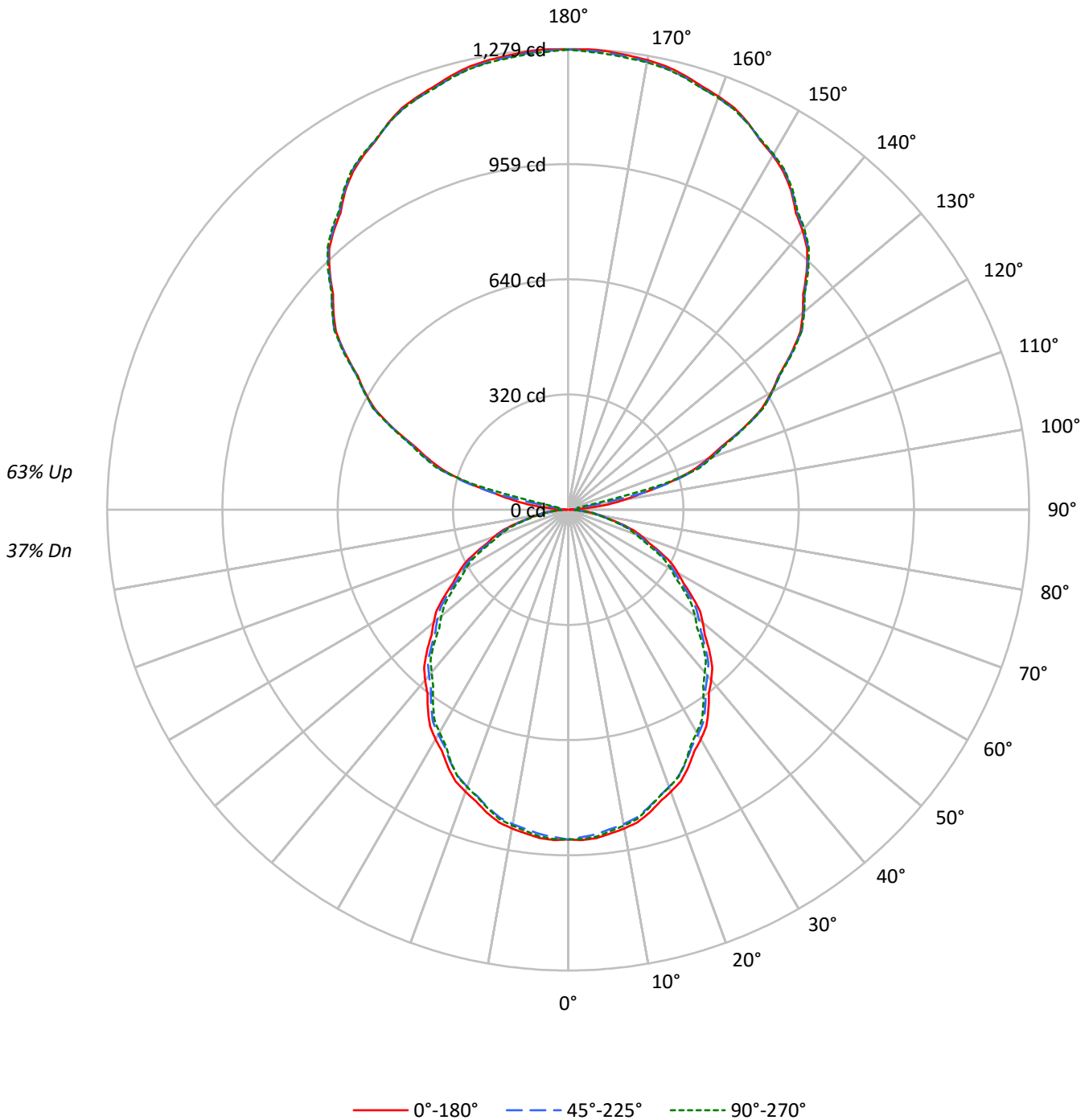
Input Watts (W): 45.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	104	104	104	104	94	94	94	94	76	76	76	60	60	60	44	44	44	37				
1	95	91	87	83	86	82	79	76	67	64	62	52	51	50	39	38	37	31				
2	86	79	73	68	78	72	67	62	58	55	52	46	44	41	35	33	32	26				
3	79	69	62	57	71	63	57	52	52	47	43	41	38	35	31	29	27	22				
4	72	61	54	48	65	56	49	44	46	41	37	36	33	30	27	25	23	19				
5	66	55	47	41	60	50	43	38	41	36	32	32	29	26	25	22	20	17				
6	61	49	41	35	55	45	38	33	37	31	28	29	25	23	22	20	18	15				
7	56	44	36	31	51	40	33	29	33	28	24	27	23	20	20	18	16	13				
8	52	40	32	27	47	37	30	25	30	25	21	24	20	18	19	16	14	12				
9	48	36	29	24	44	33	27	22	28	23	19	22	19	16	17	15	13	10				
10	45	33	26	22	41	31	24	20	25	21	17	21	17	14	16	13	11	9				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7389	7389	7389
5°	7412	7323	7376
10°	7365	7263	7299
15°	7276	7160	7178
20°	7158	7032	7039
25°	7023	6886	6866
30°	6858	6715	6652
35°	6686	6535	6447
40°	6509	6330	6215
45°	6322	6130	6012
50°	6116	5951	5766
55°	5895	5719	5533
60°	5672	5459	5293
65°	5421	5213	5001
70°	5141	4881	4692
75°	4713	4482	4370
80°	4193	4021	3924
85°	3668	3538	3464



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.2	1.4
10°-20°	242.9	3.9
20°-30°	357.5	5.7
30°-40°	415.6	6.6
40°-50°	415.6	6.6
50°-60°	363.5	5.8
60°-70°	270.0	4.3
70°-80°	153.4	2.4
80°-90°	48.0	0.8
90°-100°	43.7	0.7
100°-110°	278.4	4.4
110°-120°	532.6	8.5
120°-130°	676.2	10.7
130°-140°	723.4	11.5
140°-150°	676.5	10.7
150°-160°	545.5	8.7
160°-170°	351.9	5.6
170°-180°	121.3	1.9
0°-30°	686.6	10.9
0°-40°	1102.1	17.5
0°-60°	1881.3	29.9
0°-90°	2352.6	37.3
90°-120°	854.7	13.6
90°-150°	2930.8	46.5
90°-180°	3949.0	62.7
0°-180°	6302.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	915	915	915	915	915	
5°	915	911	904	911	910	87
15°	871	867	857	861	859	245
25°	788	783	773	774	771	363
35°	678	673	663	658	654	424
45°	554	548	537	529	527	427
55°	419	416	406	398	393	375
65°	284	280	273	266	262	281
75°	151	147	144	141	140	161
85°	40	40	38	38	37	44
90°	3	13	21	27	29	5
95°	52	22	21	26	28	68
105°	288	293	298	304	272	301
115°	537	539	539	540	540	528
125°	754	758	756	759	760	673
135°	936	935	939	941	942	721
145°	1079	1082	1082	1083	1085	674
155°	1183	1184	1181	1185	1182	545
165°	1248	1244	1243	1250	1242	353
175°	1277	1271	1272	1280	1269	122
180°	1277	1277	1277	1277	1277	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	915.3	915.3	915.3	915.3	915.3	915.3	915.3	915.3	915.3	915.3	915.3
2.5°	917.7	917.3	916.9	916.5	916.2	915.2	913.8	912.4	910.9	909.5	910.8
5°	914.6	914.0	913.3	912.7	912.0	910.8	909.0	907.2	905.4	903.6	905.4
7.5°	906.1	905.4	904.8	904.2	903.5	902.2	900.2	898.2	896.2	894.2	895.7
10°	898.4	897.9	897.2	896.5	895.9	894.5	892.4	890.2	888.2	886.0	887.3
12.5°	888.5	887.9	887.2	886.6	885.9	884.5	882.2	880.0	877.7	875.4	876.8
15°	870.6	870.0	869.3	868.6	868.0	866.5	864.0	861.6	859.1	856.7	857.6
17.5°	849.0	848.2	847.4	846.6	845.7	844.2	841.9	839.6	837.3	835.0	835.6
20°	833.2	832.4	831.6	830.8	829.9	828.3	825.9	823.4	821.0	818.5	819.0
22.5°	816.1	815.1	814.1	812.9	811.9	810.1	807.7	805.2	802.8	800.3	801.3
25°	788.4	787.3	786.2	785.0	783.9	782.2	779.9	777.6	775.3	773.1	773.3
27.5°	756.8	755.6	754.4	753.3	752.1	750.5	748.3	746.2	744.0	742.0	741.6
30°	735.7	734.3	733.0	731.7	730.5	728.7	726.6	724.4	722.4	720.3	719.6
32.5°	713.3	712.2	711.0	709.8	708.7	706.9	704.7	702.5	700.2	698.0	697.2
35°	678.4	677.3	676.2	675.0	673.9	672.1	669.9	667.6	665.3	663.1	661.9
37.5°	641.6	640.6	639.5	638.5	637.4	635.7	633.3	630.8	628.4	625.9	624.7
40°	617.6	616.2	614.9	613.7	612.4	610.5	608.0	605.6	603.1	600.7	599.1
42.5°	591.7	591.0	590.2	589.4	588.6	586.8	584.2	581.5	578.7	576.1	574.2
45°	553.7	552.6	551.5	550.4	549.2	547.3	544.7	542.1	539.5	536.9	535.1
47.5°	514.0	513.2	512.5	511.6	510.9	509.3	506.9	504.4	502.0	499.6	497.6
50°	487.0	486.4	485.7	485.0	484.4	483.0	480.7	478.3	476.1	473.8	471.6
52.5°	460.6	459.9	459.0	458.3	457.5	455.9	453.5	451.1	448.7	446.2	444.2
55°	418.8	418.3	417.8	417.4	416.9	415.5	413.2	410.9	408.6	406.3	404.4
57.5°	378.9	378.3	377.8	377.2	376.6	375.3	373.1	370.8	368.5	366.3	364.4
60°	351.3	350.5	349.7	348.8	348.1	346.6	344.5	342.3	340.3	338.1	336.7
62.5°	324.3	323.7	322.9	322.3	321.6	320.1	317.9	315.7	313.4	311.1	309.8
65°	283.8	283.0	282.2	281.4	280.6	279.4	277.8	276.1	274.5	272.9	271.2
67.5°	243.1	242.3	241.6	240.8	240.1	238.9	237.3	235.8	234.2	232.6	231.1
70°	217.8	216.7	215.6	214.4	213.3	212.1	210.8	209.4	208.1	206.8	205.6
72.5°	190.9	189.7	188.6	187.4	186.2	185.2	184.2	183.1	182.1	181.0	179.9
75°	151.1	150.2	149.5	148.6	147.8	147.0	146.2	145.3	144.6	143.7	143.1
77.5°	113.1	112.7	112.4	112.1	111.7	111.1	110.4	109.7	109.0	108.3	108.0
80°	90.2	89.7	89.3	88.8	88.2	87.8	87.6	87.2	86.9	86.5	86.2
82.5°	68.0	67.7	67.5	67.2	67.0	66.8	66.8	66.7	66.6	66.6	66.4
85°	39.6	39.6	39.6	39.6	39.6	39.4	39.1	38.8	38.5	38.2	38.2
87.5°	15.8	16.2	16.5	16.9	17.2	17.4	17.6	17.9	18.1	18.3	18.6
90°	2.8	5.2	7.5	9.9	12.2	14.2	15.9	17.6	19.3	21.0	22.2
92.5°	12.1	12.2	12.3	12.4	12.5	13.5	15.2	16.9	18.6	20.3	21.5
95°	52.5	45.3	38.1	30.9	23.7	20.2	20.4	20.5	20.8	21.0	22.2
97.5°	111.5	116.0	120.6	125.1	129.5	120.0	96.2	72.6	48.9	25.2	25.4
100°	156.7	160.4	164.3	168.1	171.9	159.2	129.9	100.6	71.4	42.0	38.5
102.5°	207.1	209.8	212.6	215.5	218.2	217.7	214.0	210.1	206.2	202.5	163.5
105°	287.5	288.7	290.0	291.2	292.6	293.7	294.7	295.9	296.9	297.9	299.8
107.5°	362.1	362.8	363.4	364.0	364.7	365.7	367.1	368.6	370.0	371.5	372.4
110°	412.6	413.2	413.8	414.4	415.1	416.0	417.4	418.6	419.9	421.1	421.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	461.5	462.6	463.7	464.9	466.0	466.9	467.5	468.1	468.6	469.3	469.2
115°	536.7	537.3	538.0	538.6	539.2	539.4	539.2	539.0	538.9	538.6	539.0
117.5°	604.5	605.3	606.1	607.0	607.8	608.5	609.0	609.4	609.9	610.4	610.3
120°	650.4	651.2	652.1	652.9	653.7	654.0	653.8	653.7	653.4	653.2	653.7
122.5°	693.1	693.6	694.1	694.7	695.1	695.6	695.9	696.2	696.4	696.7	697.0
125°	754.4	755.3	756.1	757.0	757.8	758.0	757.6	757.1	756.8	756.3	757.0
127.5°	812.5	812.7	812.9	813.1	813.3	813.9	814.9	815.9	816.8	817.8	817.7
130°	849.9	850.2	850.4	850.6	850.7	851.2	851.9	852.4	853.1	853.8	853.9
132.5°	884.3	884.7	885.0	885.4	885.8	886.5	887.2	888.1	888.8	889.7	889.9
135°	935.9	935.7	935.5	935.2	935.0	935.4	936.2	937.1	937.9	938.8	939.1
137.5°	981.5	981.6	981.7	981.8	981.8	982.3	983.3	984.2	985.1	986.1	986.6
140°	1011.3	1011.7	1012.2	1012.6	1013.0	1013.4	1013.9	1014.3	1014.7	1015.1	1015.8
142.5°	1038.0	1038.8	1039.5	1040.4	1041.1	1041.6	1041.9	1042.1	1042.4	1042.6	1043.1
145°	1079.1	1079.8	1080.3	1081.0	1081.7	1081.9	1081.9	1081.9	1081.9	1081.9	1082.2
147.5°	1111.7	1113.0	1114.2	1115.3	1116.5	1117.0	1116.8	1116.6	1116.3	1116.2	1116.3
150°	1135.5	1136.3	1137.2	1138.0	1138.9	1139.2	1139.0	1138.8	1138.5	1138.3	1138.3
152.5°	1155.3	1156.0	1156.7	1157.3	1158.0	1158.2	1157.8	1157.4	1157.1	1156.7	1157.0
155°	1183.2	1183.5	1183.6	1183.8	1184.0	1183.8	1183.2	1182.6	1181.9	1181.3	1182.1
157.5°	1206.7	1206.5	1206.5	1206.3	1206.2	1205.8	1205.0	1204.3	1203.6	1202.9	1204.0
160°	1220.4	1219.8	1219.2	1218.5	1217.9	1217.5	1217.3	1217.0	1216.8	1216.6	1217.9
162.5°	1232.7	1231.9	1231.1	1230.2	1229.5	1228.9	1228.7	1228.5	1228.3	1228.0	1229.4
165°	1248.1	1247.1	1246.0	1244.9	1243.9	1243.4	1243.4	1243.4	1243.4	1243.4	1245.1
167.5°	1260.4	1259.2	1258.2	1257.1	1255.9	1255.4	1255.2	1255.1	1255.0	1254.8	1256.7
170°	1267.2	1265.9	1264.7	1263.4	1262.2	1261.6	1261.8	1262.1	1262.3	1262.4	1264.1
172.5°	1271.8	1270.5	1269.2	1268.0	1266.7	1266.2	1266.4	1266.6	1266.9	1267.1	1268.8
175°	1276.8	1275.5	1274.2	1273.0	1271.7	1271.2	1271.4	1271.6	1271.8	1272.1	1273.9
177.5°	1279.0	1277.9	1276.7	1275.5	1274.3	1273.9	1274.2	1274.6	1274.9	1275.3	1276.6
180°	1276.8	1276.8	1276.8	1276.8	1276.8	1276.8	1276.8	1276.8	1276.8	1276.8	1276.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	915.3	915.3	915.3	915.3	915.3	915.3	915.3	915.3
2.5°	912.1	913.4	914.7	915.3	915.1	915.0	914.9	914.7
5°	907.2	909.0	910.8	911.5	911.2	910.9	910.5	910.2
7.5°	897.1	898.5	899.9	900.6	900.4	900.2	900.0	899.8
10°	888.6	889.9	891.3	891.7	891.4	891.1	890.7	890.4
12.5°	878.4	879.8	881.2	881.7	881.2	880.7	880.3	879.9
15°	858.7	859.6	860.5	860.8	860.4	859.9	859.3	858.8
17.5°	836.2	836.8	837.4	837.5	837.3	836.9	836.6	836.3
20°	819.5	820.0	820.5	820.6	820.2	819.9	819.6	819.3
22.5°	802.1	803.0	803.9	804.0	803.4	802.9	802.3	801.6
25°	773.4	773.5	773.7	773.5	772.8	772.1	771.5	770.8
27.5°	741.2	740.7	740.4	739.8	739.0	738.2	737.4	736.5
30°	719.0	718.3	717.7	716.9	716.0	715.3	714.4	713.6
32.5°	696.4	695.6	694.8	694.0	693.2	692.4	691.5	690.8
35°	660.7	659.6	658.5	657.5	656.7	655.8	655.1	654.2
37.5°	623.5	622.2	620.9	619.8	618.8	617.6	616.6	615.5
40°	597.5	595.8	594.2	593.0	592.1	591.4	590.5	589.7
42.5°	572.3	570.3	568.4	567.2	566.8	566.2	565.6	565.1
45°	533.3	531.5	529.7	528.6	528.1	527.6	527.1	526.6
47.5°	495.6	493.5	491.5	489.9	488.7	487.4	486.2	484.9
50°	469.2	466.9	464.7	463.1	462.0	461.1	460.1	459.1
52.5°	442.1	440.2	438.2	436.5	435.3	434.0	432.8	431.6
55°	402.5	400.5	398.5	397.0	396.1	395.1	394.1	393.1
57.5°	362.6	360.7	358.8	357.4	356.5	355.5	354.6	353.6
60°	335.2	333.8	332.2	331.1	330.3	329.5	328.7	327.8
62.5°	308.5	307.1	305.8	304.7	303.9	303.1	302.3	301.4
65°	269.6	268.0	266.4	265.1	264.3	263.4	262.7	261.8
67.5°	229.5	228.0	226.4	225.5	225.3	225.1	224.8	224.6
70°	204.2	202.9	201.6	200.8	200.2	199.7	199.3	198.8
72.5°	178.9	177.9	176.8	176.1	175.6	175.1	174.7	174.1
75°	142.4	141.8	141.2	140.7	140.5	140.4	140.3	140.1
77.5°	107.8	107.6	107.4	107.2	106.7	106.3	105.8	105.5
80°	85.9	85.6	85.2	85.0	84.8	84.6	84.5	84.4
82.5°	66.2	66.0	65.8	65.6	65.5	65.3	65.1	64.9
85°	38.2	38.2	38.2	38.1	37.9	37.7	37.6	37.4
87.5°	18.8	19.0	19.3	19.5	19.5	19.6	19.7	19.8
90°	23.6	24.8	26.1	27.0	27.3	27.8	28.2	28.7
92.5°	22.8	24.0	25.4	26.0	26.1	26.2	26.3	26.4
95°	23.6	24.8	26.1	26.9	27.1	27.2	27.5	27.7
97.5°	25.4	25.6	25.7	25.9	26.1	26.3	26.5	26.8
100°	34.8	31.2	27.6	25.9	26.1	26.3	26.5	26.8
102.5°	124.6	85.7	46.8	27.3	27.3	27.4	27.4	27.5
105°	301.8	303.7	305.6	302.7	295.1	287.5	279.8	272.2
107.5°	373.3	374.3	375.2	376.1	376.9	377.7	378.5	379.3
110°	422.0	422.4	422.8	423.4	424.0	424.6	425.3	425.9



TEST NUMBER: P332761-830

CATALOG NUMBER: S124DIW-S575D1050U830-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	469.1	469.0	468.9	469.3	470.1	470.9	471.7	472.5
115°	539.4	539.9	540.3	540.5	540.5	540.5	540.5	540.5
117.5°	610.2	610.2	610.1	610.0	609.9	609.8	609.7	609.6
120°	654.0	654.5	654.9	654.9	654.5	654.0	653.7	653.2
122.5°	697.3	697.5	697.8	697.7	697.3	696.8	696.4	696.0
125°	757.6	758.3	758.8	759.3	759.5	759.7	760.0	760.2
127.5°	817.6	817.5	817.3	817.2	817.0	816.8	816.6	816.5
130°	854.1	854.4	854.6	854.7	854.7	854.7	854.7	854.7
132.5°	890.0	890.3	890.5	890.5	890.3	890.1	890.0	889.9
135°	939.6	940.0	940.5	940.8	941.3	941.7	942.2	942.5
137.5°	987.0	987.5	988.0	988.2	988.0	987.9	987.8	987.6
140°	1016.4	1017.0	1017.7	1018.1	1018.3	1018.5	1018.7	1019.0
142.5°	1043.6	1044.1	1044.5	1044.7	1044.8	1044.8	1044.9	1044.9
145°	1082.4	1082.6	1082.8	1083.2	1083.5	1084.0	1084.4	1084.9
147.5°	1116.5	1116.6	1116.8	1117.0	1117.3	1117.5	1117.7	1117.9
150°	1138.3	1138.3	1138.3	1138.4	1138.6	1138.9	1139.1	1139.3
152.5°	1157.3	1157.6	1158.0	1158.1	1158.0	1157.8	1157.7	1157.6
155°	1183.0	1183.8	1184.7	1184.8	1184.1	1183.6	1182.9	1182.2
157.5°	1205.0	1206.2	1207.3	1207.3	1206.2	1205.0	1204.0	1202.9
160°	1219.2	1220.4	1221.7	1221.7	1220.4	1219.2	1217.9	1216.6
162.5°	1230.6	1231.9	1233.1	1233.1	1231.6	1230.2	1228.8	1227.3
165°	1246.8	1248.5	1250.2	1250.0	1248.1	1246.2	1244.3	1242.4
167.5°	1258.6	1260.5	1262.3	1262.2	1260.1	1257.9	1255.8	1253.7
170°	1265.8	1267.5	1269.2	1269.0	1266.9	1264.8	1262.6	1260.6
172.5°	1270.5	1272.1	1273.8	1273.6	1271.2	1268.9	1266.7	1264.3
175°	1275.8	1277.7	1279.7	1279.3	1276.8	1274.2	1271.7	1269.1
177.5°	1278.0	1279.3	1280.7	1280.3	1278.3	1276.3	1274.2	1272.2
180°	1276.8	1276.8	1276.8	1276.8	1276.8	1276.8	1276.8	1276.8

(END OF REPORT)