

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: P332762-840

Luminaire Tested: **S124DIW-S575D1050U840-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332762-840
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-S575D1050U840-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1050 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6190.6 lumens
Efficiency: N/A
Efficacy: 137.0 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: General Diffuse

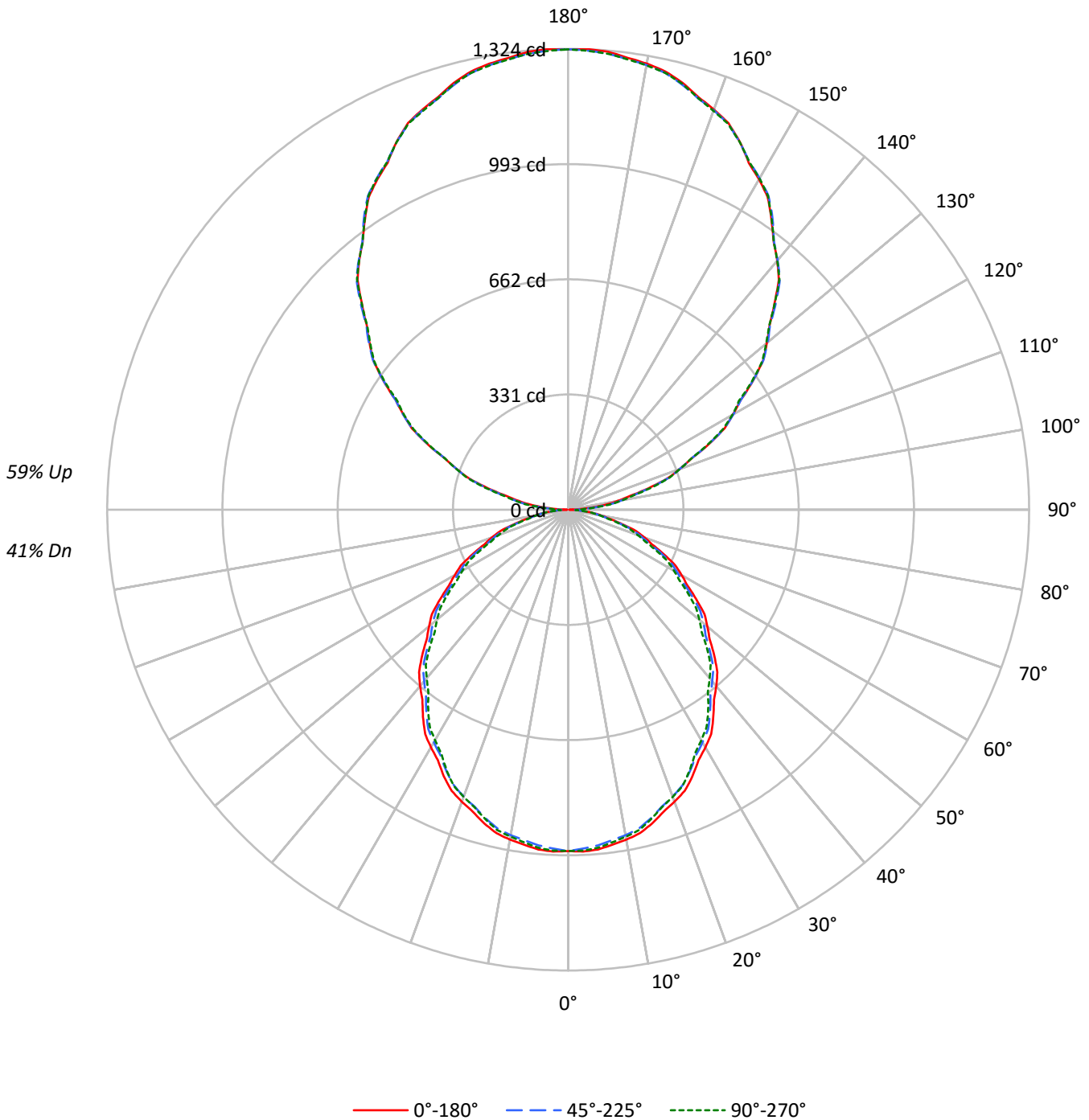
Input Watts (W): 45.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	105	105	105	105	96	96	96	96	78	78	78	62	62	62	48	48	48	41
1	96	91	88	84	87	83	80	77	68	66	64	55	53	52	42	41	40	34
2	87	80	74	69	79	73	68	63	60	56	53	48	45	43	37	35	34	29
3	79	70	63	57	72	64	58	53	53	48	44	42	39	36	33	31	29	24
4	73	62	54	48	66	57	50	45	47	42	38	38	34	31	29	27	25	21
5	67	55	47	41	60	51	44	38	42	37	33	34	30	27	26	24	22	18
6	61	49	41	36	56	45	38	33	38	32	28	31	27	24	24	21	19	16
7	57	45	37	31	51	41	34	29	34	29	25	28	24	21	22	19	17	14
8	52	40	33	27	48	37	30	26	31	26	22	25	21	19	20	17	15	13
9	49	37	29	24	44	34	27	23	28	23	20	23	19	17	18	16	14	11
10	46	34	27	22	42	31	25	20	26	21	18	22	18	15	17	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7917	7917	7917
5°	7942	7846	7903
10°	7891	7782	7820
15°	7796	7672	7691
20°	7669	7534	7541
25°	7525	7378	7357
30°	7347	7194	7127
35°	7164	7001	6908
40°	6973	6783	6658
45°	6774	6567	6441
50°	6553	6376	6178
55°	6315	6128	5928
60°	6077	5848	5670
65°	5809	5585	5358
70°	5509	5231	5028
75°	5050	4803	4682
80°	4491	4310	4203
85°	3927	3788	3714



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.4	1.5
10°-20°	260.2	4.2
20°-30°	383.0	6.2
30°-40°	445.3	7.2
40°-50°	445.3	7.2
50°-60°	389.5	6.3
60°-70°	289.3	4.7
70°-80°	164.3	2.7
80°-90°	51.4	0.8
90°-100°	87.2	1.4
100°-110°	258.4	4.2
110°-120°	438.7	7.1
120°-130°	578.4	9.3
130°-140°	649.6	10.5
140°-150°	638.4	10.3
150°-160°	536.9	8.7
160°-170°	357.2	5.8
170°-180°	125.1	2.0
0°-30°	735.6	11.9
0°-40°	1180.9	19.1
0°-60°	2015.7	32.6
0°-90°	2520.6	40.7
90°-120°	784.3	12.7
90°-150°	2650.7	42.8
90°-180°	3670.0	59.3
0°-180°	6190.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	981	981	981	981	981	
5°	980	976	968	976	975	93
15°	933	929	918	922	920	263
25°	845	839	828	829	826	388
35°	727	721	710	705	701	454
45°	593	587	575	567	564	457
55°	449	446	435	426	421	402
65°	304	300	292	285	280	301
75°	162	158	154	151	150	172
85°	42	42	41	41	40	47
90°	3	14	22	28	31	6
95°	61	70	78	81	81	68
105°	238	240	244	247	250	253
115°	446	446	444	443	442	440
125°	650	650	649	647	644	579
135°	838	844	844	842	839	648
145°	1018	1022	1023	1022	1019	637
155°	1166	1166	1165	1169	1165	536
165°	1270	1267	1264	1270	1266	358
175°	1321	1316	1315	1321	1315	125
180°	1323	1323	1323	1323	1323	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	980.7	980.7	980.7	980.7	980.7	980.7	980.7	980.7	980.7	980.7	980.7
2.5°	983.2	982.8	982.4	982.0	981.6	980.6	979.1	977.5	975.9	974.4	975.8
5°	980.0	979.3	978.6	977.9	977.1	975.8	973.9	972.0	970.1	968.2	970.1
7.5°	970.8	970.1	969.5	968.8	968.1	966.6	964.5	962.4	960.2	958.1	959.7
10°	962.6	962.0	961.3	960.6	959.9	958.4	956.1	953.8	951.6	949.3	950.7
12.5°	952.0	951.3	950.6	949.9	949.2	947.7	945.2	942.8	940.4	938.0	939.5
15°	932.8	932.1	931.4	930.7	930.0	928.4	925.7	923.1	920.5	917.9	918.9
17.5°	909.7	908.8	908.0	907.1	906.2	904.5	902.0	899.6	897.1	894.6	895.2
20°	892.7	891.8	891.0	890.1	889.2	887.5	884.8	882.2	879.6	877.0	877.5
22.5°	874.4	873.3	872.2	871.0	869.9	868.0	865.4	862.7	860.1	857.5	858.5
25°	844.8	843.5	842.3	841.1	839.9	838.1	835.6	833.1	830.7	828.3	828.5
27.5°	810.8	809.6	808.3	807.1	805.8	804.1	801.7	799.5	797.2	795.0	794.6
30°	788.2	786.8	785.4	784.0	782.6	780.7	778.5	776.2	774.0	771.7	771.0
32.5°	764.3	763.1	761.7	760.5	759.3	757.4	755.1	752.7	750.2	747.8	747.0
35°	726.9	725.7	724.5	723.3	722.1	720.1	717.7	715.3	712.9	710.4	709.1
37.5°	687.4	686.3	685.2	684.1	683.0	681.2	678.5	675.9	673.3	670.7	669.3
40°	661.7	660.2	658.8	657.5	656.1	654.1	651.5	648.8	646.2	643.6	641.9
42.5°	634.0	633.2	632.4	631.5	630.7	628.7	625.9	623.0	620.1	617.2	615.2
45°	593.3	592.1	590.9	589.7	588.4	586.4	583.6	580.8	578.0	575.2	573.3
47.5°	550.7	549.9	549.1	548.2	547.3	545.6	543.1	540.5	537.9	535.3	533.1
50°	521.8	521.1	520.4	519.7	519.0	517.5	515.0	512.5	510.1	507.7	505.2
52.5°	493.5	492.7	491.8	491.0	490.2	488.5	485.8	483.3	480.7	478.1	475.9
55°	448.7	448.2	447.7	447.2	446.7	445.1	442.7	440.2	437.8	435.4	433.2
57.5°	406.0	405.4	404.8	404.1	403.5	402.1	399.7	397.3	394.9	392.4	390.4
60°	376.4	375.6	374.7	373.8	372.9	371.3	369.1	366.8	364.6	362.2	360.7
62.5°	347.5	346.8	346.0	345.3	344.6	343.0	340.6	338.2	335.8	333.4	331.9
65°	304.1	303.3	302.4	301.5	300.6	299.3	297.6	295.8	294.1	292.4	290.5
67.5°	260.4	259.6	258.8	258.0	257.2	256.0	254.3	252.7	251.0	249.2	247.6
70°	233.4	232.2	231.0	229.7	228.5	227.2	225.8	224.4	223.0	221.6	220.3
72.5°	204.5	203.3	202.1	200.8	199.5	198.4	197.3	196.2	195.1	193.9	192.8
75°	161.9	161.0	160.2	159.3	158.3	157.5	156.6	155.7	154.9	154.0	153.3
77.5°	121.2	120.8	120.4	120.1	119.7	119.1	118.3	117.5	116.7	116.0	115.7
80°	96.6	96.1	95.6	95.1	94.5	94.1	93.8	93.4	93.1	92.7	92.4
82.5°	72.8	72.5	72.3	72.0	71.8	71.6	71.6	71.5	71.4	71.4	71.1
85°	42.4	42.4	42.4	42.4	42.4	42.2	41.9	41.6	41.2	40.9	40.9
87.5°	17.0	17.4	17.7	18.1	18.4	18.7	18.9	19.2	19.4	19.6	19.9
90°	3.0	5.6	8.1	10.6	13.0	15.2	17.1	18.9	20.7	22.5	23.8
92.5°	21.9	24.7	27.7	30.5	33.3	35.4	36.7	38.0	39.3	40.5	41.3
95°	61.4	63.4	65.4	67.6	69.6	71.4	73.0	74.5	76.1	77.8	78.5
97.5°	107.2	108.9	110.5	112.1	113.8	115.5	117.3	119.3	121.1	123.0	123.8
100°	143.2	144.1	145.0	145.9	146.8	148.3	150.4	152.4	154.5	156.5	156.9
102.5°	180.9	181.3	181.6	182.0	182.3	183.4	185.3	187.1	189.0	190.9	191.6
105°	238.3	238.6	238.8	239.0	239.2	239.8	240.8	241.7	242.6	243.5	244.2
107.5°	298.7	299.0	299.2	299.5	299.8	300.0	300.1	300.3	300.4	300.5	301.2
110°	339.6	340.1	340.5	341.0	341.4	341.5	341.3	341.1	340.9	340.6	340.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	382.2	382.3	382.4	382.4	382.5	382.4	382.0	381.6	381.2	380.8	380.7
115°	446.1	446.1	446.1	446.1	446.1	445.9	445.4	444.9	444.4	444.0	443.7
117.5°	506.2	506.3	506.5	506.8	507.0	506.9	506.5	506.2	505.9	505.5	504.8
120°	546.3	547.2	548.2	549.1	550.0	550.1	549.4	548.7	548.1	547.3	546.2
122.5°	588.0	588.4	588.8	589.2	589.5	589.6	589.2	588.9	588.5	588.2	587.4
125°	649.6	649.6	649.6	649.6	649.6	649.5	649.2	649.0	648.8	648.6	648.1
127.5°	705.5	706.2	706.8	707.5	708.2	708.4	708.0	707.6	707.3	706.9	706.5
130°	744.8	745.5	746.1	746.8	747.5	747.8	747.8	747.8	747.8	747.8	747.4
132.5°	784.9	785.4	785.9	786.4	786.9	787.0	786.9	786.7	786.5	786.3	785.9
135°	837.9	839.2	840.6	841.9	843.3	844.0	844.0	844.0	844.0	844.0	843.5
137.5°	895.5	896.2	896.9	897.5	898.1	898.6	899.0	899.4	899.7	900.1	899.5
140°	934.0	934.5	934.9	935.4	935.8	936.0	936.0	936.0	936.0	936.0	935.8
142.5°	969.3	969.7	970.2	970.6	971.1	971.2	971.0	970.8	970.7	970.5	970.4
145°	1017.9	1018.9	1019.8	1020.7	1021.6	1022.1	1022.4	1022.6	1022.8	1023.0	1022.8
147.5°	1066.2	1067.3	1068.4	1069.4	1070.6	1071.1	1070.9	1070.7	1070.5	1070.3	1070.2
150°	1095.7	1096.6	1097.5	1098.4	1099.3	1099.7	1099.7	1099.7	1099.7	1099.7	1099.7
152.5°	1123.5	1124.1	1124.6	1125.1	1125.7	1126.0	1126.2	1126.4	1126.6	1126.8	1127.3
155°	1166.3	1166.3	1166.3	1166.3	1166.3	1166.2	1165.9	1165.7	1165.5	1165.3	1166.2
157.5°	1202.2	1201.8	1201.4	1201.0	1200.6	1200.4	1200.3	1200.3	1200.2	1200.2	1200.9
160°	1223.6	1223.4	1223.0	1222.8	1222.6	1222.4	1222.1	1221.9	1221.7	1221.5	1222.1
162.5°	1243.1	1242.6	1242.0	1241.4	1240.8	1240.4	1240.2	1240.0	1239.7	1239.5	1240.7
165°	1269.6	1268.9	1268.2	1267.6	1266.9	1266.3	1265.9	1265.4	1265.0	1264.5	1265.9
167.5°	1289.8	1288.9	1288.0	1287.0	1286.1	1285.6	1285.7	1285.7	1285.7	1285.8	1287.1
170°	1301.3	1300.2	1299.0	1297.9	1296.8	1296.3	1296.6	1296.8	1297.0	1297.2	1298.6
172.5°	1309.5	1308.5	1307.6	1306.7	1305.7	1305.3	1305.3	1305.4	1305.4	1305.4	1307.0
175°	1320.7	1319.6	1318.5	1317.4	1316.2	1315.6	1315.2	1315.0	1314.8	1314.6	1316.2
177.5°	1324.4	1323.5	1322.6	1321.7	1320.8	1320.3	1320.3	1320.3	1320.3	1320.3	1321.6
180°	1322.8	1322.8	1322.8	1322.8	1322.8	1322.8	1322.8	1322.8	1322.8	1322.8	1322.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	980.7	980.7	980.7	980.7	980.7	980.7	980.7	980.7
2.5°	977.2	978.7	980.1	980.7	980.5	980.4	980.3	980.1
5°	972.0	973.9	975.8	976.6	976.2	975.9	975.5	975.2
7.5°	961.2	962.7	964.2	964.9	964.7	964.5	964.3	964.0
10°	952.1	953.5	954.9	955.4	955.0	954.7	954.3	954.0
12.5°	941.1	942.6	944.1	944.6	944.1	943.6	943.2	942.7
15°	920.0	921.0	922.0	922.3	921.8	921.3	920.7	920.2
17.5°	896.0	896.6	897.3	897.4	897.1	896.7	896.4	896.1
20°	878.1	878.6	879.1	879.2	878.8	878.5	878.2	877.8
22.5°	859.4	860.3	861.3	861.4	860.8	860.2	859.6	858.9
25°	828.6	828.8	829.0	828.7	828.0	827.3	826.6	825.9
27.5°	794.2	793.7	793.2	792.6	791.7	790.9	790.0	789.1
30°	770.3	769.6	768.9	768.1	767.2	766.4	765.5	764.6
32.5°	746.1	745.3	744.5	743.6	742.8	741.8	740.9	740.1
35°	707.9	706.7	705.5	704.5	703.6	702.7	701.9	700.9
37.5°	668.0	666.6	665.3	664.1	663.0	661.8	660.7	659.4
40°	640.2	638.3	636.6	635.3	634.4	633.6	632.7	631.8
42.5°	613.2	611.1	609.0	607.7	607.2	606.6	606.0	605.4
45°	571.4	569.5	567.5	566.3	565.8	565.3	564.7	564.2
47.5°	531.0	528.8	526.6	524.9	523.6	522.2	520.9	519.6
50°	502.7	500.3	497.9	496.1	495.0	494.0	493.0	491.9
52.5°	473.7	471.6	469.5	467.7	466.4	465.0	463.7	462.4
55°	431.2	429.1	427.0	425.4	424.3	423.3	422.2	421.2
57.5°	388.5	386.5	384.5	382.9	381.9	380.9	379.9	378.9
60°	359.1	357.6	356.0	354.8	353.9	353.0	352.1	351.2
62.5°	330.5	329.0	327.6	326.5	325.6	324.8	323.9	323.0
65°	288.8	287.1	285.4	284.1	283.2	282.3	281.4	280.5
67.5°	245.9	244.3	242.6	241.6	241.4	241.2	240.9	240.7
70°	218.8	217.4	216.0	215.1	214.5	214.0	213.5	213.0
72.5°	191.7	190.6	189.5	188.6	188.1	187.6	187.1	186.5
75°	152.6	151.9	151.3	150.8	150.6	150.5	150.3	150.1
77.5°	115.5	115.3	115.1	114.8	114.3	113.9	113.4	113.0
80°	92.0	91.7	91.3	91.1	90.9	90.7	90.6	90.4
82.5°	70.9	70.7	70.5	70.3	70.2	70.0	69.8	69.6
85°	40.9	40.9	40.9	40.8	40.6	40.4	40.3	40.1
87.5°	20.1	20.4	20.7	20.9	20.9	21.0	21.1	21.2
90°	25.2	26.6	28.0	28.9	29.3	29.8	30.2	30.7
92.5°	42.1	42.9	43.8	44.3	44.6	44.8	45.1	45.4
95°	79.1	79.8	80.5	80.8	80.8	80.8	80.8	80.8
97.5°	124.6	125.4	126.2	126.6	126.6	126.6	126.6	126.6
100°	157.4	157.8	158.3	158.5	158.5	158.5	158.5	158.5
102.5°	192.2	192.8	193.5	193.9	194.0	194.2	194.4	194.6
105°	244.9	245.5	246.2	246.9	247.6	248.2	248.9	249.6
107.5°	301.8	302.5	303.2	303.4	303.4	303.4	303.3	303.3
110°	339.7	339.3	338.8	339.0	339.6	340.3	341.0	341.7



TEST NUMBER: P332762-840

CATALOG NUMBER: S124DIW-S575D1050U840-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	380.6	380.5	380.4	380.4	380.6	380.7	380.8	381.0
115°	443.5	443.3	443.1	442.8	442.6	442.4	442.2	441.9
117.5°	504.0	503.2	502.5	501.9	501.4	501.0	500.5	500.1
120°	545.0	543.9	542.8	542.4	542.9	543.3	543.8	544.2
122.5°	586.7	585.9	585.1	584.3	583.5	582.7	581.9	581.1
125°	647.7	647.2	646.8	646.3	645.9	645.4	645.0	644.5
127.5°	706.0	705.6	705.1	704.7	704.3	704.0	703.6	703.3
130°	746.9	746.5	746.0	745.4	744.5	743.6	742.7	741.7
132.5°	785.4	785.0	784.5	784.1	783.8	783.4	782.9	782.6
135°	843.1	842.6	842.2	841.6	840.9	840.2	839.6	838.9
137.5°	898.9	898.3	897.7	897.5	897.6	897.8	897.9	898.0
140°	935.6	935.4	935.1	934.9	934.7	934.5	934.2	934.0
142.5°	970.4	970.3	970.3	970.2	970.2	970.2	970.1	970.1
145°	1022.6	1022.4	1022.1	1021.7	1021.0	1020.3	1019.7	1019.0
147.5°	1070.0	1069.8	1069.5	1069.3	1069.1	1068.9	1068.6	1068.4
150°	1099.7	1099.7	1099.7	1099.6	1099.4	1099.2	1098.9	1098.7
152.5°	1127.8	1128.4	1128.9	1128.9	1128.3	1127.7	1127.1	1126.6
155°	1167.1	1168.0	1168.9	1168.9	1168.0	1167.1	1166.2	1165.3
157.5°	1201.6	1202.2	1203.0	1203.0	1202.1	1201.3	1200.6	1199.8
160°	1222.8	1223.6	1224.3	1224.0	1222.8	1221.7	1220.6	1219.4
162.5°	1241.9	1243.1	1244.5	1244.5	1243.3	1242.2	1241.0	1239.9
165°	1267.2	1268.6	1269.9	1270.1	1269.2	1268.3	1267.4	1266.5
167.5°	1288.5	1289.8	1291.2	1291.2	1289.8	1288.4	1287.0	1285.6
170°	1299.9	1301.3	1302.6	1302.5	1301.0	1299.4	1297.8	1296.2
172.5°	1308.5	1310.0	1311.6	1311.5	1310.0	1308.4	1306.8	1305.1
175°	1317.8	1319.4	1321.0	1321.0	1319.4	1317.8	1316.2	1314.6
177.5°	1322.9	1324.1	1325.4	1325.3	1323.8	1322.4	1321.0	1319.5
180°	1322.8	1322.8	1322.8	1322.8	1322.8	1322.8	1322.8	1322.8

(END OF REPORT)