

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: P332735-927

Luminaire Tested: **S124DIW-S350D1340U927-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332735-927
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-S350D1340U927-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1340 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5394.9 lumens
Efficiency: N/A
Efficacy: 115.8 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

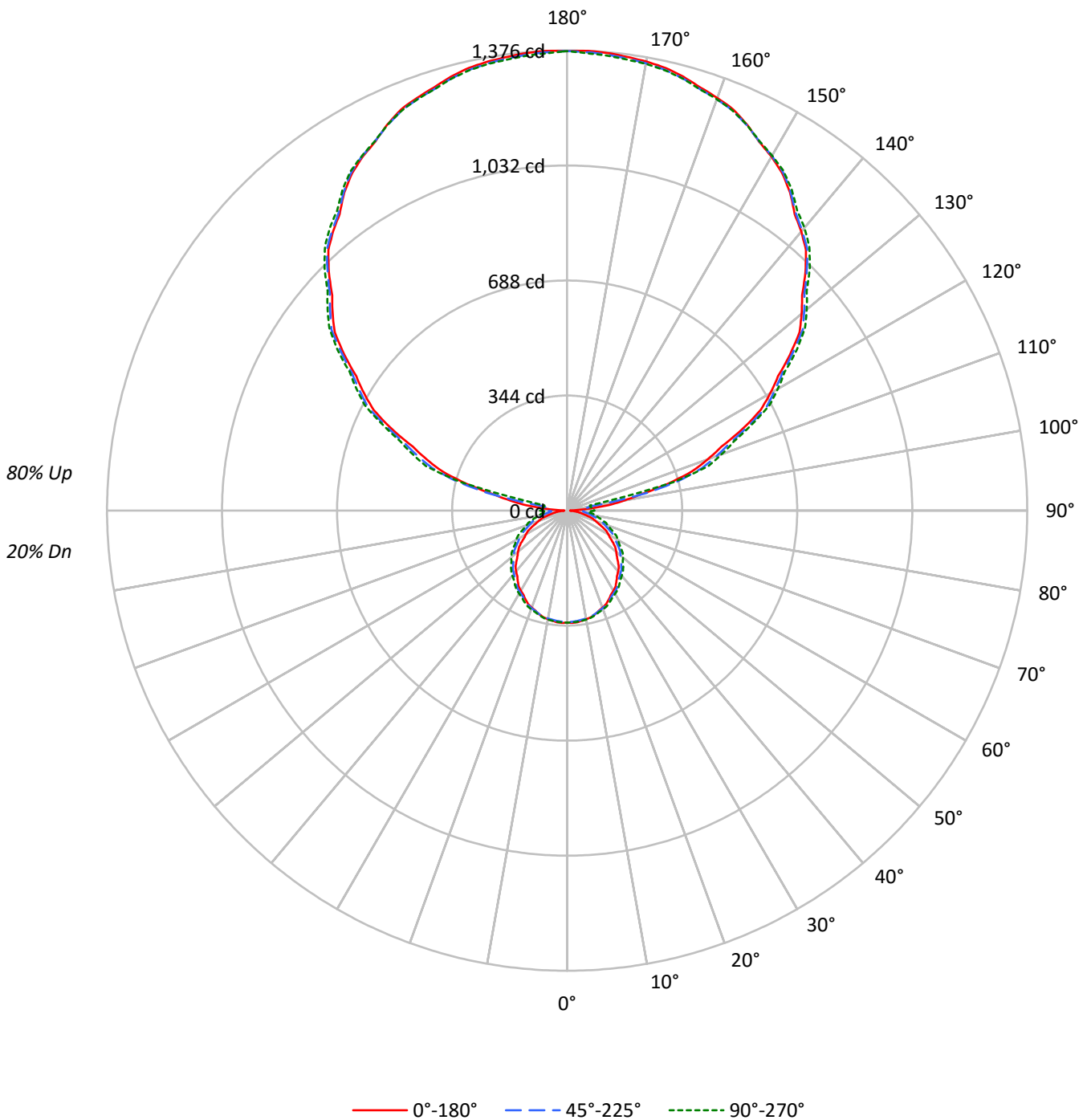
Input Watts (W): 46.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	100	100	100	88	88	88	88	66	66	66	47	47	47	28	28	28	20
1	91	86	82	79	80	76	73	70	57	55	53	40	39	38	24	24	23	16
2	82	75	69	64	72	66	61	57	50	47	44	35	33	31	21	20	19	13
3	75	66	59	53	66	58	52	47	44	40	37	31	28	26	19	17	16	11
4	68	58	50	44	60	51	45	40	39	34	31	27	24	22	16	15	14	9
5	62	51	44	38	55	45	39	34	34	30	26	24	21	19	15	13	12	8
6	57	46	38	32	50	41	34	29	31	26	23	22	19	16	13	12	10	7
7	53	41	33	28	46	37	30	25	28	23	20	20	17	14	12	10	9	6
8	49	37	30	25	43	33	27	22	25	21	17	18	15	13	11	9	8	5
9	45	34	26	22	40	30	24	20	23	18	15	16	13	11	10	8	7	5
10	42	31	24	19	37	27	21	17	21	17	14	15	12	10	9	8	6	4

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2704	2704	2704
5°	2712	2641	2650
10°	2694	2599	2596
15°	2670	2549	2535
20°	2635	2494	2475
25°	2594	2432	2408
30°	2549	2370	2340
35°	2498	2307	2280
40°	2458	2247	2218
45°	2398	2191	2164
50°	2348	2128	2108
55°	2296	2068	2042
60°	2214	1991	1982
65°	2125	1909	1908
70°	2018	1816	1820
75°	1867	1712	1743
80°	1701	1613	1665
85°	1489	1525	1621



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.7	0.6
10°-20°	90.8	1.7
20°-30°	137.4	2.5
30°-40°	166.2	3.1
40°-50°	175.7	3.3
50°-60°	165.4	3.1
60°-70°	137.2	2.5
70°-80°	96.4	1.8
80°-90°	58.5	1.1
90°-100°	79.3	1.5
100°-110°	323.5	6.0
110°-120°	589.2	10.9
120°-130°	736.6	13.7
130°-140°	782.3	14.5
140°-150°	728.7	13.5
150°-160°	587.0	10.9
160°-170°	378.6	7.0
170°-180°	130.5	2.4
0°-30°	259.9	4.8
0°-40°	426.1	7.9
0°-60°	767.2	14.2
0°-90°	1059.3	19.6
90°-120°	992.0	18.4
90°-150°	3239.6	60.0
90°-180°	4336.0	80.4
0°-180°	5394.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	335	335	335	335	335	
5°	335	334	331	334	334	32
15°	321	322	321	324	324	90
25°	294	296	297	301	302	135
35°	257	262	266	270	272	161
45°	214	222	229	235	237	166
55°	168	176	187	194	197	150
65°	116	128	141	150	153	115
75°	64	78	94	104	108	69
85°	20	36	52	63	68	21
90°	9	35	60	76	82	7
95°	61	41	55	71	76	77
105°	313	327	345	361	330	327
115°	580	586	597	607	610	570
125°	813	817	824	834	838	726
135°	1008	1007	1013	1021	1026	776
145°	1161	1164	1164	1167	1171	726
155°	1273	1274	1271	1275	1272	587
165°	1343	1338	1338	1345	1337	379
175°	1374	1368	1369	1377	1366	131
180°	1374	1374	1374	1374	1374	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	334.9	334.9	334.9	334.9	334.9	334.9	334.9	334.9	334.9	334.9	334.9
2.5°	336.0	335.8	335.6	335.4	335.3	334.9	334.4	333.8	333.3	332.7	333.2
5°	335.3	334.9	334.7	334.5	334.2	333.8	333.2	332.6	332.1	331.4	332.2
7.5°	332.4	332.2	332.1	331.9	331.8	331.4	331.0	330.5	330.0	329.5	330.3
10°	329.9	329.9	329.8	329.7	329.6	329.4	329.0	328.5	328.1	327.7	328.4
12.5°	326.7	326.6	326.6	326.6	326.6	326.5	326.1	325.9	325.6	325.3	326.0
15°	321.3	321.5	321.5	321.6	321.7	321.6	321.3	321.1	320.8	320.6	321.3
17.5°	314.1	314.3	314.6	314.8	315.1	315.2	315.1	315.1	315.1	315.0	315.8
20°	309.0	309.2	309.5	309.7	310.0	310.1	310.2	310.3	310.4	310.5	311.3
22.5°	303.2	303.6	303.9	304.2	304.5	304.8	304.9	305.1	305.2	305.4	306.2
25°	294.0	294.5	295.0	295.5	296.0	296.4	296.6	296.8	297.1	297.4	298.3
27.5°	283.6	284.4	285.1	285.8	286.5	287.1	287.5	287.9	288.3	288.7	289.5
30°	276.7	277.4	278.1	278.7	279.4	280.0	280.6	281.1	281.8	282.3	283.3
32.5°	269.3	270.1	270.8	271.6	272.4	273.1	273.8	274.4	275.1	275.8	276.8
35°	257.2	258.3	259.2	260.2	261.3	262.1	263.0	263.8	264.7	265.5	266.6
37.5°	245.2	246.3	247.5	248.6	249.8	250.8	251.9	252.9	254.0	255.0	256.2
40°	237.3	238.4	239.6	240.6	241.7	242.8	244.0	245.2	246.3	247.5	248.7
42.5°	228.4	229.6	230.8	232.0	233.2	234.5	235.9	237.3	238.6	240.0	241.4
45°	214.4	216.0	217.6	219.2	220.8	222.4	223.9	225.5	227.1	228.7	230.1
47.5°	201.2	202.9	204.5	206.1	207.7	209.5	211.3	213.2	215.0	216.8	218.2
50°	191.6	193.5	195.3	197.1	198.9	200.7	202.6	204.5	206.3	208.1	209.8
52.5°	182.0	183.9	185.7	187.5	189.3	191.3	193.4	195.5	197.6	199.7	201.4
55°	168.0	169.8	171.5	173.3	175.0	177.1	179.6	182.1	184.6	187.1	188.8
57.5°	152.3	154.5	156.6	158.8	161.0	163.3	165.8	168.3	170.7	173.3	175.2
60°	142.1	144.3	146.5	148.6	150.8	153.2	156.0	158.8	161.4	164.2	166.1
62.5°	132.2	134.6	137.0	139.3	141.6	144.3	146.9	149.7	152.5	155.3	157.2
65°	116.2	118.9	121.6	124.2	126.9	129.7	132.5	135.3	138.2	141.0	143.1
67.5°	100.8	103.7	106.5	109.4	112.2	115.1	118.2	121.2	124.2	127.2	129.4
70°	90.4	93.2	96.0	98.9	101.7	104.7	107.9	111.1	114.2	117.4	119.6
72.5°	80.2	83.1	86.0	88.9	91.7	94.9	98.2	101.6	105.0	108.4	110.5
75°	64.5	67.6	70.7	73.8	76.8	80.1	83.7	87.1	90.6	94.1	96.5
77.5°	49.9	53.2	56.4	59.7	62.9	66.4	70.0	73.8	77.4	81.0	83.4
80°	40.9	44.2	47.5	50.9	54.2	57.7	61.4	65.0	68.7	72.4	74.9
82.5°	31.8	35.3	38.8	42.3	45.7	49.3	53.0	56.6	60.3	64.0	66.5
85°	19.9	23.4	26.9	30.3	33.9	37.5	41.3	45.0	48.7	52.5	55.0
87.5°	11.7	15.6	19.5	23.4	27.3	31.3	35.3	39.3	43.3	47.4	50.1
90°	9.1	14.9	20.8	26.6	32.5	38.1	43.5	48.9	54.3	59.7	63.5
92.5°	18.6	21.8	25.0	28.0	31.2	35.5	40.9	46.3	51.7	57.1	60.8
95°	61.4	56.4	51.3	46.3	41.4	40.6	44.3	47.9	51.6	55.2	58.9
97.5°	124.5	131.7	138.9	146.1	153.3	145.8	123.7	101.6	79.5	57.4	59.7
100°	172.6	178.9	185.2	191.5	197.7	186.7	158.5	130.2	102.0	73.7	72.1
102.5°	226.9	231.8	236.7	241.6	246.5	248.5	247.6	246.7	245.7	244.9	205.1
105°	312.7	315.7	318.7	321.8	324.8	328.4	332.6	336.9	341.1	345.3	349.4
107.5°	392.9	395.0	397.0	399.1	401.2	404.4	408.8	413.4	417.8	422.2	425.3
110°	446.9	448.8	450.6	452.4	454.3	457.3	461.6	466.0	470.2	474.5	476.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	499.2	501.5	503.7	506.0	508.3	511.1	514.5	517.9	521.3	524.8	526.6
115°	579.7	581.1	582.6	584.0	585.4	587.4	589.9	592.2	594.7	597.1	599.4
117.5°	652.6	653.9	655.3	656.6	658.1	660.2	663.2	666.1	669.2	672.2	673.8
120°	701.6	702.7	703.9	705.1	706.2	708.0	710.1	712.3	714.5	716.7	718.8
122.5°	747.7	748.2	748.8	749.4	750.0	751.6	754.2	756.9	759.5	762.1	764.0
125°	813.3	814.0	814.9	815.7	816.6	817.8	819.4	821.0	822.7	824.3	826.6
127.5°	875.6	875.8	875.9	876.1	876.2	877.6	880.3	882.9	885.6	888.2	889.5
130°	915.6	915.8	915.9	916.0	916.2	917.3	919.2	921.3	923.3	925.3	927.1
132.5°	952.6	952.9	953.2	953.5	953.9	955.1	957.0	958.9	960.8	962.7	964.4
135°	1007.7	1007.5	1007.3	1007.0	1006.8	1007.4	1008.9	1010.4	1011.9	1013.4	1015.2
137.5°	1056.9	1056.9	1056.9	1056.9	1056.9	1057.5	1058.8	1060.1	1061.4	1062.6	1064.4
140°	1088.9	1089.3	1089.6	1090.0	1090.4	1090.8	1091.4	1091.9	1092.4	1093.0	1094.8
142.5°	1117.4	1118.2	1119.0	1119.7	1120.5	1121.1	1121.3	1121.6	1121.7	1122.0	1123.4
145°	1161.4	1162.1	1162.7	1163.2	1163.9	1164.2	1164.2	1164.2	1164.2	1164.2	1164.9
147.5°	1196.6	1197.8	1199.0	1200.2	1201.3	1201.9	1201.7	1201.4	1201.2	1200.9	1201.2
150°	1222.1	1222.9	1223.8	1224.6	1225.4	1225.7	1225.5	1225.3	1225.0	1224.8	1224.8
152.5°	1243.2	1243.9	1244.6	1245.3	1246.0	1246.2	1245.8	1245.3	1244.9	1244.5	1244.9
155°	1273.1	1273.3	1273.5	1273.7	1274.0	1273.7	1273.1	1272.4	1271.7	1271.1	1271.9
157.5°	1298.4	1298.2	1298.1	1297.9	1297.8	1297.4	1296.6	1295.8	1295.1	1294.3	1295.5
160°	1313.1	1312.5	1311.8	1311.1	1310.4	1310.0	1309.7	1309.5	1309.2	1309.1	1310.4
162.5°	1326.3	1325.4	1324.6	1323.7	1322.9	1322.3	1322.1	1321.8	1321.6	1321.4	1322.7
165°	1343.0	1341.8	1340.7	1339.5	1338.4	1337.8	1337.8	1337.8	1337.8	1337.8	1339.7
167.5°	1356.1	1354.9	1353.8	1352.6	1351.4	1350.7	1350.6	1350.4	1350.3	1350.1	1352.2
170°	1363.5	1362.2	1360.7	1359.4	1358.0	1357.5	1357.6	1357.9	1358.1	1358.4	1360.2
172.5°	1368.4	1367.1	1365.7	1364.3	1362.9	1362.4	1362.6	1362.9	1363.0	1363.3	1365.1
175°	1373.8	1372.4	1371.0	1369.7	1368.3	1367.7	1367.9	1368.2	1368.4	1368.7	1370.7
177.5°	1376.3	1375.0	1373.6	1372.4	1371.1	1370.6	1371.0	1371.4	1371.7	1372.1	1373.6
180°	1373.8	1373.8	1373.8	1373.8	1373.8	1373.8	1373.8	1373.8	1373.8	1373.8	1373.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	334.9	334.9	334.9	334.9	334.9	334.9	334.9	334.9
2.5°	333.7	334.1	334.6	334.8	334.8	334.7	334.6	334.5
5°	332.8	333.4	334.1	334.5	334.4	334.2	334.1	334.1
7.5°	331.1	331.8	332.6	332.9	332.8	332.7	332.6	332.6
10°	329.2	329.9	330.7	331.1	331.0	330.9	330.8	330.7
12.5°	326.7	327.4	328.0	328.4	328.4	328.4	328.4	328.3
15°	322.1	322.8	323.6	323.9	323.8	323.8	323.7	323.6
17.5°	316.5	317.3	318.1	318.4	318.3	318.2	318.2	318.1
20°	312.1	313.0	313.8	314.3	314.3	314.3	314.3	314.3
22.5°	307.0	307.8	308.7	309.2	309.3	309.4	309.6	309.7
25°	299.2	300.1	301.0	301.5	301.6	301.7	301.7	301.8
27.5°	290.3	291.2	292.1	292.6	292.6	292.7	292.8	292.9
30°	284.2	285.1	286.0	286.5	286.7	286.9	287.1	287.2
32.5°	277.8	278.9	280.0	280.6	280.7	280.9	281.1	281.2
35°	267.8	268.9	270.1	270.8	271.1	271.3	271.6	271.9
37.5°	257.4	258.5	259.7	260.5	260.7	260.9	261.3	261.5
40°	250.0	251.2	252.5	253.3	253.6	254.0	254.3	254.6
42.5°	242.7	244.2	245.5	246.4	246.6	246.8	247.2	247.4
45°	231.6	233.0	234.4	235.3	235.8	236.1	236.5	236.9
47.5°	219.8	221.2	222.7	223.6	224.2	224.7	225.1	225.7
50°	211.4	213.1	214.8	215.9	216.3	216.8	217.4	217.9
52.5°	203.0	204.7	206.4	207.5	207.9	208.4	209.0	209.5
55°	190.4	192.1	193.8	194.9	195.4	195.8	196.4	196.9
57.5°	177.2	179.2	181.2	182.4	182.8	183.3	183.8	184.3
60°	168.1	170.0	171.9	173.2	173.9	174.5	175.2	175.9
62.5°	159.1	161.0	162.9	164.2	164.9	165.5	166.2	166.8
65°	145.1	147.3	149.3	150.7	151.4	152.0	152.7	153.4
67.5°	131.5	133.6	135.7	137.1	137.8	138.4	139.0	139.7
70°	121.8	124.1	126.4	127.8	128.3	129.0	129.5	130.1
72.5°	112.7	114.9	117.1	118.5	119.1	119.8	120.5	121.1
75°	98.8	101.1	103.5	105.0	105.8	106.5	107.3	108.0
77.5°	85.8	88.2	90.5	92.1	92.9	93.7	94.5	95.3
80°	77.4	79.9	82.4	84.0	84.6	85.3	86.0	86.6
82.5°	69.1	71.7	74.2	75.9	76.6	77.3	78.1	78.8
85°	57.5	60.0	62.5	64.2	65.0	65.8	66.6	67.5
87.5°	52.8	55.5	58.1	59.9	60.7	61.5	62.3	63.1
90°	67.3	71.1	74.9	77.3	78.4	79.5	80.7	81.8
92.5°	64.6	68.3	72.0	74.2	75.0	75.7	76.5	77.2
95°	62.5	66.1	69.7	72.0	73.0	74.0	74.9	75.9
97.5°	62.0	64.4	66.7	68.4	69.3	70.2	71.1	72.1
100°	70.4	68.8	67.2	66.8	67.6	68.4	69.2	70.0
102.5°	165.4	125.7	86.0	66.5	67.3	68.0	68.7	69.3
105°	353.6	357.7	361.9	360.2	352.6	345.1	337.5	329.9
107.5°	428.4	431.4	434.5	436.7	438.2	439.7	441.2	442.6
110°	479.3	481.6	484.0	485.8	487.2	488.5	489.9	491.2



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CATALOG NUMBER: S124DIW-S350D1340U927-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	528.3	530.0	531.8	533.5	535.0	536.5	538.1	539.6
115°	601.7	604.0	606.3	607.8	608.3	608.9	609.5	610.1
117.5°	675.4	677.1	678.7	679.9	680.4	681.0	681.6	682.1
120°	721.0	723.0	725.2	726.4	726.6	726.7	727.0	727.2
122.5°	766.0	767.9	769.8	770.9	771.0	771.1	771.3	771.4
125°	828.8	831.1	833.4	834.9	835.6	836.3	837.0	837.7
127.5°	891.0	892.3	893.7	894.5	894.9	895.3	895.7	896.0
130°	928.8	930.5	932.2	933.3	933.9	934.4	934.9	935.3
132.5°	966.1	967.7	969.4	970.4	970.7	971.1	971.4	971.7
135°	1017.0	1018.7	1020.6	1021.9	1022.9	1023.9	1024.8	1025.8
137.5°	1066.1	1067.8	1069.5	1070.6	1070.8	1071.1	1071.3	1071.7
140°	1096.5	1098.3	1100.0	1101.3	1101.9	1102.6	1103.2	1103.8
142.5°	1124.9	1126.3	1127.8	1128.7	1129.1	1129.5	1129.9	1130.3
145°	1165.6	1166.3	1167.0	1167.8	1168.6	1169.4	1170.2	1171.0
147.5°	1201.4	1201.7	1202.0	1202.3	1202.8	1203.3	1203.8	1204.3
150°	1224.8	1224.8	1224.8	1224.9	1225.1	1225.3	1225.6	1225.8
152.5°	1245.2	1245.6	1245.9	1246.1	1245.9	1245.8	1245.7	1245.5
155°	1272.9	1273.7	1274.7	1274.8	1274.1	1273.4	1272.7	1272.1
157.5°	1296.6	1297.8	1299.0	1299.0	1297.8	1296.6	1295.5	1294.3
160°	1311.8	1313.1	1314.5	1314.5	1313.1	1311.8	1310.4	1309.1
162.5°	1324.1	1325.5	1326.8	1326.7	1325.2	1323.7	1322.1	1320.6
165°	1341.5	1343.3	1345.1	1345.0	1343.0	1340.9	1338.9	1336.8
167.5°	1354.2	1356.1	1358.2	1358.0	1355.7	1353.4	1351.2	1348.9
170°	1362.0	1363.8	1365.6	1365.4	1363.2	1360.9	1358.6	1356.3
172.5°	1366.9	1368.8	1370.6	1370.3	1367.8	1365.3	1362.9	1360.4
175°	1372.8	1374.8	1376.9	1376.5	1373.8	1371.0	1368.3	1365.6
177.5°	1375.1	1376.5	1378.0	1377.6	1375.4	1373.2	1371.0	1368.8
180°	1373.8	1373.8	1373.8	1373.8	1373.8	1373.8	1373.8	1373.8

(END OF REPORT)