

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: P332529-830

Luminaire Tested: **S124DIP-S350D1205U830-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332529-830
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: S124DIP-S350D1205U830-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1205 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5891.7 lumens
Efficiency: N/A
Efficacy: 139.6 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

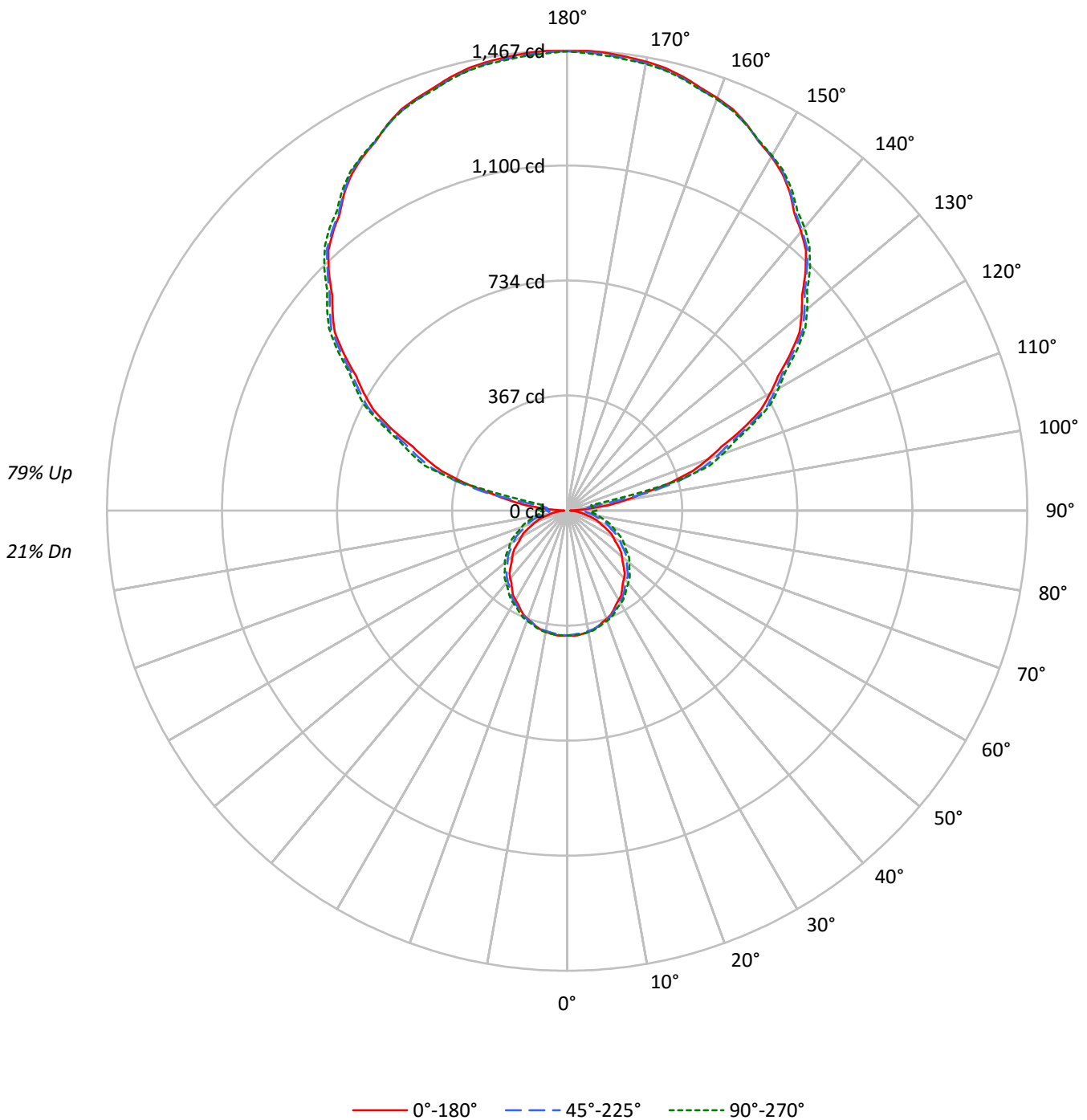
Input Watts (W): 42.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	100	100	100	89	89	89	89	67	67	67	48	48	48	30	30	30	21
1	91	87	83	79	80	77	73	71	58	56	54	41	40	39	26	25	24	17
2	83	75	69	64	73	67	62	57	51	47	44	36	34	32	22	21	20	14
3	75	66	59	53	66	59	53	48	45	40	37	32	29	27	20	18	17	12
4	69	58	50	45	60	52	45	40	39	35	31	28	25	23	17	16	14	10
5	63	51	44	38	55	46	39	34	35	30	27	25	22	19	16	14	12	8
6	58	46	38	33	51	41	34	29	31	27	23	22	19	17	14	12	11	7
7	53	41	34	28	47	37	30	25	28	24	20	20	17	15	13	11	9	6
8	49	37	30	25	43	33	27	22	26	21	18	18	15	13	12	10	8	6
9	46	34	27	22	40	30	24	20	23	19	16	17	14	12	11	9	8	5
10	42	31	24	19	37	28	22	17	21	17	14	15	12	10	10	8	7	5

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3216	3216	3216
5°	3227	3143	3152
10°	3207	3092	3090
15°	3177	3032	3016
20°	3134	2967	2944
25°	3086	2893	2865
30°	3032	2819	2784
35°	2972	2744	2713
40°	2925	2674	2639
45°	2853	2607	2575
50°	2794	2532	2508
55°	2732	2460	2429
60°	2635	2369	2357
65°	2529	2272	2269
70°	2400	2161	2166
75°	2220	2037	2074
80°	2021	1919	1981
85°	1773	1815	1928



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.7	0.6
10°-20°	108.1	1.8
20°-30°	163.4	2.8
30°-40°	197.8	3.4
40°-50°	209.1	3.5
50°-60°	196.8	3.3
60°-70°	163.2	2.8
70°-80°	114.7	1.9
80°-90°	69.0	1.2
90°-100°	88.6	1.5
100°-110°	347.8	5.9
110°-120°	630.0	10.7
120°-130°	786.2	13.3
130°-140°	834.3	14.2
140°-150°	776.8	13.2
150°-160°	625.7	10.6
160°-170°	403.5	6.8
170°-180°	139.1	2.4
0°-30°	309.3	5.2
0°-40°	507.0	8.6
0°-60°	912.9	15.5
0°-90°	1259.8	21.4
90°-120°	1066.3	18.1
90°-150°	3463.7	58.8
90°-180°	4632.0	78.6
0°-180°	5891.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	398	398	398	398	398	
5°	399	397	394	398	398	38
15°	382	383	381	385	385	108
25°	350	352	354	358	359	161
35°	306	311	316	322	324	192
45°	255	264	272	279	282	197
55°	200	210	223	231	234	178
65°	138	153	168	178	182	137
75°	77	93	112	124	128	82
85°	24	42	62	75	80	25
90°	10	40	68	87	94	8
95°	66	46	63	81	87	82
105°	334	350	371	389	356	349
115°	618	626	639	650	654	608
125°	867	871	880	891	895	774
135°	1074	1074	1081	1090	1095	827
145°	1238	1241	1241	1245	1249	773
155°	1357	1358	1355	1359	1356	625
165°	1431	1426	1426	1434	1425	404
175°	1464	1458	1459	1467	1456	139
180°	1464	1464	1464	1464	1464	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4
2.5°	399.8	399.5	399.4	399.1	398.9	398.4	397.8	397.2	396.5	395.9	396.4
5°	398.9	398.5	398.2	397.9	397.7	397.2	396.4	395.8	395.1	394.4	395.2
7.5°	395.5	395.3	395.1	394.9	394.7	394.4	393.8	393.2	392.7	392.1	392.9
10°	392.6	392.5	392.4	392.3	392.2	391.9	391.4	390.9	390.4	389.9	390.8
12.5°	388.7	388.6	388.6	388.6	388.6	388.4	388.0	387.8	387.4	387.1	387.9
15°	382.3	382.5	382.6	382.7	382.8	382.7	382.3	382.0	381.7	381.4	382.3
17.5°	373.7	374.0	374.3	374.6	374.8	375.0	374.9	374.8	374.8	374.8	375.7
20°	367.6	367.9	368.3	368.5	368.8	369.0	369.1	369.2	369.3	369.4	370.4
22.5°	360.8	361.2	361.6	361.9	362.3	362.6	362.8	363.0	363.2	363.4	364.3
25°	349.8	350.3	351.0	351.6	352.1	352.6	352.9	353.2	353.5	353.8	354.9
27.5°	337.4	338.4	339.2	340.1	340.9	341.6	342.0	342.5	343.0	343.5	344.4
30°	329.2	330.1	330.8	331.6	332.4	333.2	333.8	334.5	335.3	335.9	337.1
32.5°	320.4	321.3	322.3	323.2	324.1	325.0	325.7	326.5	327.3	328.1	329.3
35°	306.0	307.3	308.4	309.6	310.9	311.9	312.9	313.9	314.9	315.8	317.3
37.5°	291.7	293.0	294.5	295.8	297.2	298.4	299.7	301.0	302.2	303.4	304.8
40°	282.4	283.7	285.0	286.3	287.6	288.9	290.3	291.7	293.0	294.5	296.0
42.5°	271.7	273.1	274.6	276.1	277.5	279.0	280.7	282.3	283.9	285.5	287.2
45°	255.1	257.0	258.9	260.8	262.7	264.6	266.5	268.3	270.2	272.1	273.8
47.5°	239.4	241.4	243.3	245.2	247.1	249.2	251.4	253.6	255.8	258.0	259.7
50°	228.0	230.2	232.3	234.5	236.7	238.8	241.1	243.3	245.4	247.6	249.6
52.5°	216.6	218.8	220.9	223.1	225.3	227.6	230.1	232.6	235.1	237.6	239.6
55°	199.9	202.0	204.1	206.1	208.2	210.8	213.7	216.7	219.6	222.6	224.6
57.5°	181.3	183.8	186.3	189.0	191.5	194.3	197.3	200.2	203.1	206.1	208.5
60°	169.1	171.6	174.3	176.8	179.4	182.3	185.6	188.9	192.1	195.4	197.7
62.5°	157.3	160.1	163.0	165.8	168.5	171.6	174.8	178.1	181.4	184.7	187.0
65°	138.3	141.5	144.7	147.8	151.0	154.3	157.6	161.0	164.4	167.8	170.2
67.5°	120.0	123.4	126.8	130.2	133.5	137.0	140.6	144.2	147.8	151.4	153.9
70°	107.5	110.8	114.2	117.6	121.0	124.6	128.4	132.1	135.9	139.7	142.3
72.5°	95.4	98.9	102.3	105.8	109.1	112.9	116.9	120.9	124.9	128.9	131.5
75°	76.7	80.4	84.1	87.8	91.4	95.3	99.5	103.7	107.8	112.0	114.8
77.5°	59.4	63.2	67.1	71.0	74.8	79.0	83.3	87.8	92.1	96.4	99.2
80°	48.6	52.6	56.6	60.5	64.5	68.6	73.0	77.4	81.7	86.1	89.1
82.5°	37.9	42.0	46.2	50.3	54.4	58.6	63.1	67.4	71.7	76.2	79.2
85°	23.7	27.8	32.0	36.1	40.3	44.6	49.1	53.5	58.0	62.5	65.4
87.5°	13.9	18.5	23.0	27.6	32.1	36.9	41.6	46.3	51.0	55.8	58.9
90°	10.5	17.1	23.8	30.3	37.0	43.5	49.7	55.8	62.0	68.2	72.6
92.5°	20.5	24.3	28.0	31.8	35.4	40.4	46.7	52.8	59.0	65.2	69.5
95°	66.1	61.1	56.0	51.0	46.0	45.7	50.0	54.3	58.6	62.9	67.0
97.5°	133.2	141.2	149.1	157.1	165.0	157.5	134.4	111.2	88.1	64.9	67.7
100°	184.5	191.4	198.4	205.4	212.4	201.0	171.3	141.6	111.8	82.1	80.6
102.5°	242.3	247.8	253.3	258.7	264.2	266.6	266.1	265.5	264.9	264.3	222.3
105°	333.7	337.1	340.5	344.0	347.4	351.6	356.5	361.4	366.3	371.2	375.8
107.5°	419.2	421.6	424.0	426.3	428.7	432.3	437.5	442.6	447.8	452.9	456.4
110°	476.7	478.8	480.9	483.1	485.1	488.7	493.6	498.5	503.5	508.4	511.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	532.4	535.0	537.5	540.1	542.6	545.8	549.9	553.8	557.8	561.8	563.9
115°	618.2	619.8	621.4	623.0	624.6	627.0	629.9	632.8	635.7	638.7	641.3
117.5°	695.9	697.4	698.9	700.4	701.9	704.4	707.8	711.3	714.8	718.3	720.3
120°	748.1	749.3	750.6	751.9	753.2	755.1	757.7	760.3	763.0	765.6	768.1
122.5°	797.1	797.8	798.4	799.1	799.7	801.5	804.6	807.7	810.7	813.8	816.1
125°	867.0	867.9	868.7	869.6	870.4	871.9	873.9	875.9	877.9	879.9	882.5
127.5°	933.5	933.6	933.8	933.9	934.1	935.7	938.7	941.7	944.7	947.7	949.3
130°	976.1	976.2	976.4	976.5	976.7	977.9	980.1	982.5	984.8	987.1	989.2
132.5°	1015.5	1015.8	1016.2	1016.5	1016.8	1018.1	1020.3	1022.5	1024.7	1026.9	1028.8
135°	1074.2	1073.9	1073.7	1073.5	1073.2	1073.9	1075.6	1077.2	1078.9	1080.6	1082.7
137.5°	1126.5	1126.5	1126.5	1126.5	1126.5	1127.2	1128.6	1130.0	1131.4	1132.8	1134.8
140°	1160.7	1161.1	1161.5	1161.9	1162.2	1162.7	1163.3	1163.9	1164.5	1165.1	1167.1
142.5°	1191.0	1191.8	1192.7	1193.5	1194.4	1195.0	1195.2	1195.4	1195.7	1195.9	1197.6
145°	1238.0	1238.6	1239.3	1239.9	1240.6	1240.9	1240.9	1240.9	1240.9	1240.9	1241.7
147.5°	1275.4	1276.8	1278.0	1279.2	1280.5	1281.0	1280.8	1280.5	1280.3	1280.1	1280.3
150°	1302.6	1303.5	1304.4	1305.2	1306.1	1306.5	1306.2	1306.0	1305.7	1305.4	1305.4
152.5°	1325.0	1325.8	1326.5	1327.3	1328.0	1328.2	1327.9	1327.4	1326.9	1326.5	1326.9
155°	1357.0	1357.2	1357.4	1357.6	1357.9	1357.6	1357.0	1356.2	1355.5	1354.7	1355.8
157.5°	1383.8	1383.7	1383.6	1383.5	1383.3	1382.8	1382.0	1381.2	1380.4	1379.5	1380.7
160°	1399.7	1398.9	1398.2	1397.5	1396.8	1396.3	1396.0	1395.7	1395.5	1395.2	1396.8
162.5°	1413.6	1412.8	1411.8	1410.9	1409.9	1409.4	1409.1	1408.9	1408.6	1408.4	1409.9
165°	1431.4	1430.2	1429.0	1427.8	1426.5	1426.0	1426.0	1426.0	1426.0	1426.0	1427.9
167.5°	1445.4	1444.2	1442.9	1441.6	1440.4	1439.6	1439.5	1439.4	1439.3	1439.1	1441.2
170°	1453.3	1451.9	1450.4	1449.0	1447.5	1446.9	1447.1	1447.4	1447.6	1447.8	1449.8
172.5°	1458.6	1457.1	1455.7	1454.2	1452.7	1452.1	1452.4	1452.6	1452.8	1453.1	1455.0
175°	1464.2	1462.8	1461.3	1459.9	1458.4	1457.8	1458.0	1458.3	1458.6	1458.8	1460.9
177.5°	1466.9	1465.6	1464.1	1462.8	1461.4	1460.9	1461.3	1461.7	1462.2	1462.5	1464.1
180°	1464.2	1464.2	1464.2	1464.2	1464.2	1464.2	1464.2	1464.2	1464.2	1464.2	1464.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4
2.5°	397.0	397.6	398.1	398.3	398.3	398.2	398.1	398.0
5°	396.0	396.7	397.6	397.9	397.8	397.7	397.6	397.5
7.5°	393.9	394.7	395.7	396.1	396.0	395.9	395.8	395.7
10°	391.7	392.6	393.5	393.9	393.8	393.7	393.6	393.5
12.5°	388.7	389.6	390.3	390.7	390.7	390.7	390.7	390.6
15°	383.2	384.1	385.0	385.4	385.3	385.2	385.1	385.0
17.5°	376.5	377.5	378.4	378.8	378.7	378.6	378.6	378.5
20°	371.4	372.4	373.3	373.9	373.9	373.9	373.9	373.9
22.5°	365.3	366.3	367.3	367.9	368.1	368.2	368.3	368.5
25°	356.0	357.0	358.2	358.7	358.8	358.9	359.0	359.1
27.5°	345.4	346.5	347.5	348.1	348.2	348.3	348.4	348.6
30°	338.1	339.2	340.3	340.9	341.1	341.4	341.6	341.8
32.5°	330.5	331.9	333.1	333.8	334.0	334.2	334.4	334.6
35°	318.7	320.0	321.4	322.3	322.5	322.8	323.2	323.5
37.5°	306.2	307.6	309.0	309.9	310.2	310.5	310.9	311.1
40°	297.5	298.9	300.4	301.3	301.7	302.2	302.6	302.9
42.5°	288.8	290.5	292.1	293.1	293.4	293.7	294.1	294.4
45°	275.5	277.2	278.9	279.9	280.5	281.0	281.4	281.9
47.5°	261.5	263.2	264.9	266.1	266.7	267.3	267.9	268.5
50°	251.6	253.5	255.5	256.8	257.4	258.0	258.6	259.2
52.5°	241.6	243.6	245.5	246.9	247.4	248.0	248.6	249.2
55°	226.6	228.6	230.5	231.9	232.4	233.0	233.7	234.2
57.5°	210.8	213.2	215.6	217.0	217.5	218.1	218.7	219.2
60°	200.0	202.3	204.5	206.0	206.9	207.6	208.5	209.2
62.5°	189.3	191.5	193.8	195.4	196.1	196.9	197.7	198.5
65°	172.7	175.2	177.7	179.3	180.1	180.9	181.7	182.5
67.5°	156.5	159.0	161.5	163.2	163.9	164.7	165.4	166.3
70°	145.0	147.7	150.3	152.0	152.7	153.4	154.1	154.8
72.5°	134.1	136.8	139.3	141.0	141.8	142.5	143.4	144.1
75°	117.5	120.3	123.1	124.9	125.8	126.7	127.6	128.5
77.5°	102.1	104.9	107.7	109.6	110.6	111.5	112.4	113.4
80°	92.1	95.0	98.0	99.9	100.7	101.5	102.3	103.0
82.5°	82.2	85.3	88.3	90.3	91.1	92.0	92.9	93.8
85°	68.4	71.4	74.4	76.3	77.3	78.3	79.3	80.3
87.5°	62.1	65.2	68.4	70.5	71.4	72.5	73.4	74.4
90°	76.9	81.2	85.6	88.4	89.7	91.0	92.3	93.5
92.5°	73.8	78.0	82.3	84.8	85.8	86.6	87.5	88.4
95°	71.2	75.3	79.5	82.1	83.2	84.4	85.5	86.6
97.5°	70.4	73.2	76.0	77.9	79.0	80.0	81.2	82.3
100°	79.2	77.8	76.3	76.0	76.9	77.9	78.8	79.7
102.5°	180.2	138.2	96.1	75.5	76.3	77.2	78.0	78.8
105°	380.5	385.1	389.8	388.1	380.2	372.2	364.3	356.3
107.5°	459.9	463.4	466.9	469.5	471.2	472.8	474.4	476.1
110°	514.0	516.7	519.4	521.6	523.1	524.7	526.2	527.7



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CATALOG NUMBER: S124DIP-S350D1205U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	566.0	568.2	570.2	572.1	573.8	575.6	577.3	579.0
115°	643.9	646.7	649.3	651.0	651.7	652.4	653.1	653.7
117.5°	722.3	724.2	726.2	727.5	728.2	729.0	729.6	730.3
120°	770.5	773.0	775.5	776.8	777.2	777.5	777.8	778.1
122.5°	818.3	820.6	822.8	824.2	824.3	824.5	824.8	825.0
125°	885.1	887.7	890.3	892.0	892.9	893.7	894.6	895.4
127.5°	951.0	952.6	954.3	955.4	955.8	956.3	956.8	957.2
130°	991.2	993.3	995.2	996.6	997.1	997.8	998.3	998.9
132.5°	1030.8	1032.7	1034.7	1035.9	1036.2	1036.6	1037.1	1037.5
135°	1084.8	1086.8	1088.9	1090.4	1091.6	1092.6	1093.7	1094.8
137.5°	1136.8	1138.8	1140.8	1142.0	1142.3	1142.6	1143.0	1143.4
140°	1169.1	1171.1	1173.2	1174.5	1175.3	1176.0	1176.8	1177.5
142.5°	1199.2	1200.9	1202.6	1203.6	1204.1	1204.6	1205.0	1205.5
145°	1242.6	1243.4	1244.3	1245.1	1245.9	1246.8	1247.7	1248.6
147.5°	1280.6	1280.9	1281.2	1281.6	1282.1	1282.7	1283.3	1283.8
150°	1305.4	1305.4	1305.4	1305.6	1305.8	1306.1	1306.4	1306.6
152.5°	1327.3	1327.7	1328.0	1328.1	1328.0	1327.9	1327.8	1327.6
155°	1356.7	1357.6	1358.7	1358.8	1358.0	1357.3	1356.6	1355.8
157.5°	1382.1	1383.3	1384.6	1384.6	1383.3	1382.1	1380.7	1379.5
160°	1398.2	1399.7	1401.1	1401.1	1399.7	1398.2	1396.8	1395.2
162.5°	1411.4	1412.8	1414.3	1414.2	1412.5	1410.9	1409.2	1407.5
165°	1429.8	1431.8	1433.7	1433.6	1431.4	1429.2	1427.0	1424.8
167.5°	1443.4	1445.5	1447.7	1447.5	1445.1	1442.7	1440.2	1437.8
170°	1451.7	1453.7	1455.7	1455.4	1452.9	1450.5	1448.1	1445.7
172.5°	1457.0	1459.0	1460.8	1460.6	1457.9	1455.3	1452.6	1450.0
175°	1463.2	1465.4	1467.5	1467.2	1464.2	1461.3	1458.4	1455.5
177.5°	1465.7	1467.2	1468.8	1468.4	1466.0	1463.7	1461.3	1459.1
180°	1464.2	1464.2	1464.2	1464.2	1464.2	1464.2	1464.2	1464.2

(END OF REPORT)