

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: P332530-840

Luminaire Tested: **S124DIP-S350D1205U840-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332530-840
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: S124DIP-S350D1205U840-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1205 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5668.5 lumens
Efficiency: N/A
Efficacy: 134.3 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

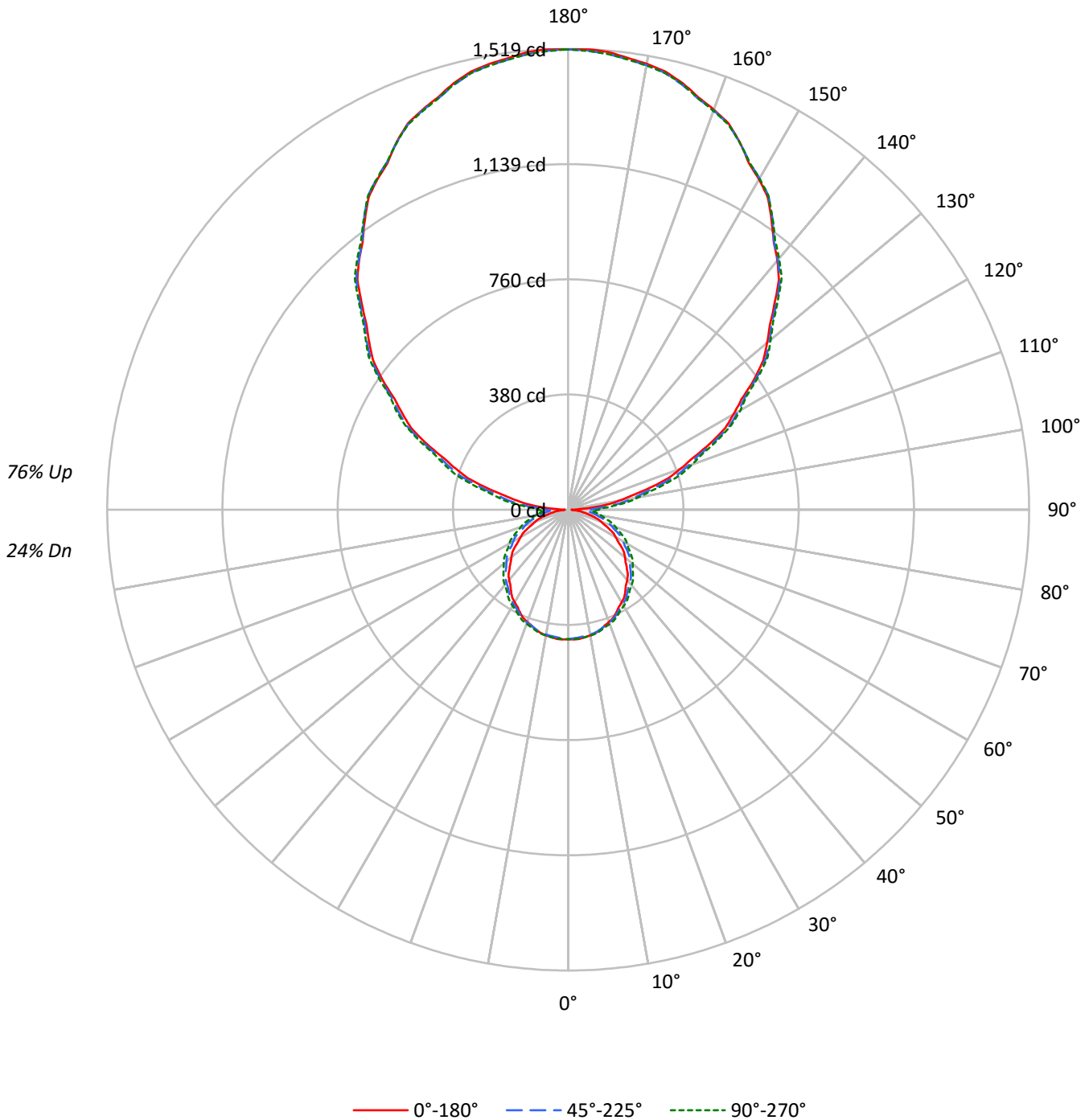
Input Watts (W): 42.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	101	101	101	90	90	90	90	69	69	69	50	50	50	32	32	32	24
1	91	87	83	80	81	77	74	71	59	57	55	43	41	40	27	27	26	19
2	83	76	70	65	73	67	62	58	52	48	45	37	35	33	24	23	21	16
3	76	66	59	53	67	59	53	48	45	41	38	33	30	28	21	19	18	13
4	69	58	51	45	61	52	45	40	40	35	32	29	26	23	19	17	15	11
5	63	52	44	38	56	46	39	34	36	31	27	26	23	20	17	15	13	9
6	58	46	38	33	51	41	35	30	32	27	23	23	20	17	15	13	12	8
7	53	41	34	28	47	37	30	26	29	24	20	21	18	15	14	12	10	7
8	49	37	30	25	44	34	27	23	26	21	18	19	16	13	13	11	9	6
9	46	34	27	22	41	30	24	20	24	19	16	17	14	12	12	10	8	6
10	43	31	24	19	38	28	22	18	22	17	14	16	13	11	11	9	7	5

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3446	3446	3446
5°	3457	3367	3378
10°	3435	3313	3310
15°	3404	3249	3231
20°	3358	3179	3155
25°	3306	3100	3070
30°	3249	3021	2983
35°	3185	2941	2907
40°	3134	2865	2828
45°	3058	2793	2759
50°	2994	2713	2687
55°	2928	2636	2603
60°	2824	2538	2526
65°	2708	2435	2431
70°	2572	2315	2320
75°	2379	2183	2220
80°	2166	2057	2123
85°	1893	1946	2065



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.4	0.7
10°-20°	115.8	2.0
20°-30°	175.1	3.1
30°-40°	211.9	3.7
40°-50°	224.0	4.0
50°-60°	210.8	3.7
60°-70°	174.9	3.1
70°-80°	122.9	2.2
80°-90°	74.0	1.3
90°-100°	141.3	2.5
100°-110°	326.9	5.8
110°-120°	523.6	9.2
120°-130°	674.9	11.9
130°-140°	750.0	13.2
140°-150°	733.1	12.9
150°-160°	615.7	10.9
160°-170°	409.7	7.2
170°-180°	143.5	2.5
0°-30°	331.4	5.8
0°-40°	543.2	9.6
0°-60°	978.1	17.3
0°-90°	1349.8	23.8
90°-120°	991.8	17.5
90°-150°	3149.8	55.6
90°-180°	4319.0	76.2
0°-180°	5668.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	427	427	427	427	427	
5°	427	426	422	426	426	41
15°	410	410	409	413	412	115
25°	375	378	379	384	385	173
35°	328	334	338	345	347	205
45°	273	282	292	299	302	211
55°	214	224	238	248	251	191
65°	148	164	180	191	196	147
75°	82	100	120	133	138	87
85°	25	46	67	81	86	27
90°	11	43	73	93	100	10
95°	77	103	131	146	152	83
105°	278	289	311	326	334	295
115°	514	519	532	541	543	507
125°	747	747	757	764	764	666
135°	962	969	972	977	977	744
145°	1168	1172	1173	1175	1173	731
155°	1338	1337	1336	1340	1336	615
165°	1456	1453	1450	1456	1452	410
175°	1515	1509	1508	1515	1508	144
180°	1517	1517	1517	1517	1517	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	426.9	426.9	426.9	426.9	426.9	426.9	426.9	426.9	426.9	426.9	426.9
2.5°	428.4	428.1	427.9	427.6	427.4	426.9	426.3	425.6	424.9	424.1	424.7
5°	427.4	427.0	426.7	426.4	426.1	425.6	424.7	424.0	423.3	422.5	423.4
7.5°	423.7	423.5	423.3	423.1	422.9	422.5	421.9	421.3	420.7	420.1	421.0
10°	420.6	420.5	420.4	420.3	420.2	419.9	419.4	418.8	418.3	417.8	418.7
12.5°	416.5	416.4	416.4	416.4	416.4	416.2	415.8	415.5	415.1	414.8	415.6
15°	409.6	409.8	409.9	410.0	410.1	410.0	409.6	409.3	409.0	408.7	409.6
17.5°	400.4	400.7	401.0	401.3	401.6	401.8	401.7	401.6	401.6	401.5	402.5
20°	393.8	394.2	394.6	394.9	395.2	395.4	395.5	395.6	395.7	395.8	396.9
22.5°	386.6	387.0	387.4	387.8	388.2	388.5	388.7	388.9	389.1	389.3	390.3
25°	374.8	375.4	376.1	376.7	377.3	377.8	378.1	378.4	378.7	379.1	380.2
27.5°	361.5	362.5	363.5	364.4	365.3	366.0	366.5	367.0	367.5	368.0	369.0
30°	352.7	353.7	354.5	355.3	356.2	357.0	357.7	358.4	359.2	359.9	361.1
32.5°	343.3	344.3	345.3	346.3	347.3	348.2	349.0	349.8	350.7	351.5	352.8
35°	327.9	329.2	330.4	331.7	333.1	334.2	335.3	336.3	337.4	338.4	339.9
37.5°	312.6	314.0	315.5	316.9	318.4	319.7	321.1	322.4	323.8	325.1	326.6
40°	302.6	304.0	305.4	306.7	308.1	309.5	311.0	312.6	314.0	315.5	317.1
42.5°	291.1	292.7	294.2	295.8	297.3	298.9	300.7	302.5	304.2	305.9	307.7
45°	273.4	275.4	277.4	279.4	281.4	283.5	285.5	287.5	289.5	291.5	293.4
47.5°	256.5	258.6	260.6	262.8	264.8	267.0	269.3	271.8	274.1	276.4	278.2
50°	244.3	246.6	248.9	251.3	253.6	255.9	258.3	260.6	263.0	265.3	267.4
52.5°	232.1	234.4	236.7	239.0	241.4	243.9	246.5	249.2	251.9	254.6	256.7
55°	214.2	216.4	218.6	220.9	223.1	225.8	228.9	232.2	235.3	238.5	240.7
57.5°	194.2	196.9	199.7	202.5	205.2	208.1	211.4	214.5	217.6	220.9	223.4
60°	181.2	183.9	186.7	189.5	192.2	195.3	198.8	202.4	205.8	209.3	211.8
62.5°	168.5	171.6	174.6	177.6	180.6	183.9	187.3	190.9	194.4	197.9	200.4
65°	148.1	151.6	155.0	158.3	161.8	165.3	168.8	172.5	176.1	179.8	182.4
67.5°	128.6	132.2	135.8	139.5	143.0	146.7	150.7	154.5	158.3	162.2	164.9
70°	115.2	118.8	122.4	126.0	129.7	133.5	137.5	141.6	145.6	149.7	152.5
72.5°	102.2	105.9	109.6	113.3	116.9	121.0	125.2	129.6	133.8	138.1	140.9
75°	82.2	86.1	90.1	94.0	98.0	102.1	106.6	111.1	115.5	120.0	123.0
77.5°	63.6	67.8	71.9	76.0	80.2	84.6	89.3	94.0	98.7	103.3	106.3
80°	52.1	56.4	60.6	64.8	69.1	73.5	78.3	82.9	87.6	92.3	95.4
82.5°	40.6	45.0	49.5	53.9	58.3	62.8	67.6	72.2	76.9	81.6	84.8
85°	25.3	29.8	34.2	38.7	43.2	47.8	52.6	57.4	62.1	67.0	70.1
87.5°	14.8	19.8	24.6	29.6	34.4	39.5	44.5	49.6	54.6	59.8	63.1
90°	11.2	18.3	25.4	32.5	39.6	46.6	53.2	59.8	66.4	73.1	77.8
92.5°	32.4	39.5	46.6	53.7	60.8	67.4	73.4	79.5	85.4	91.5	95.4
95°	76.6	82.5	88.4	94.1	100.0	106.0	112.2	118.4	124.6	130.8	134.4
97.5°	128.6	133.5	138.4	143.3	148.1	153.8	160.3	166.7	173.2	179.7	183.4
100°	169.6	173.3	177.1	181.0	184.7	189.9	196.4	202.9	209.3	215.8	219.2
102.5°	212.7	215.5	218.3	221.2	224.1	228.5	234.8	241.0	247.1	253.4	256.9
105°	277.7	280.0	282.5	284.8	287.2	290.8	295.9	300.8	305.8	310.7	314.3
107.5°	346.8	348.8	350.9	352.9	355.0	358.0	361.8	365.8	369.6	373.4	376.8
110°	393.3	395.4	397.4	399.4	401.4	404.1	407.6	411.0	414.4	418.0	419.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	441.8	443.2	444.6	446.1	447.5	449.7	452.8	455.9	459.0	462.0	464.2
115°	514.4	515.3	516.3	517.3	518.3	520.2	523.0	525.9	528.8	531.7	533.7
117.5°	583.3	584.1	584.9	585.6	586.4	588.2	591.0	593.8	596.6	599.5	600.8
120°	628.9	630.3	631.7	633.0	634.4	636.2	638.4	640.8	643.1	645.4	646.2
122.5°	676.8	677.2	677.7	678.2	678.7	680.2	682.8	685.3	687.8	690.4	691.7
125°	746.9	746.8	746.7	746.6	746.5	747.6	750.0	752.5	754.9	757.2	758.7
127.5°	810.9	811.5	812.2	812.9	813.6	814.8	816.4	818.0	819.6	821.2	822.6
130°	855.6	856.3	856.9	857.6	858.3	859.5	861.1	862.8	864.5	866.3	867.7
132.5°	901.6	902.0	902.5	902.9	903.4	904.2	905.3	906.6	907.7	908.9	910.2
135°	961.9	963.4	965.0	966.5	968.2	969.3	970.0	970.8	971.5	972.2	973.4
137.5°	1028.0	1028.6	1029.3	1029.9	1030.6	1031.2	1032.0	1032.8	1033.6	1034.3	1035.2
140°	1072.2	1072.6	1073.0	1073.4	1073.8	1074.1	1074.2	1074.3	1074.4	1074.5	1075.6
142.5°	1112.2	1112.7	1113.1	1113.6	1114.1	1114.2	1114.0	1113.7	1113.4	1113.2	1114.3
145°	1167.9	1168.8	1169.7	1170.6	1171.6	1172.3	1172.5	1172.8	1173.0	1173.3	1173.7
147.5°	1223.2	1224.4	1225.6	1226.7	1227.8	1228.3	1228.1	1227.9	1227.7	1227.5	1227.4
150°	1257.1	1258.0	1258.9	1259.8	1260.8	1261.2	1261.2	1261.2	1261.2	1261.2	1261.2
152.5°	1288.6	1289.2	1289.8	1290.4	1291.0	1291.4	1291.6	1291.8	1292.0	1292.2	1292.8
155°	1337.5	1337.5	1337.5	1337.5	1337.5	1337.4	1337.2	1336.9	1336.6	1336.4	1337.4
157.5°	1378.8	1378.4	1377.9	1377.5	1377.0	1376.6	1376.6	1376.5	1376.5	1376.4	1377.3
160°	1403.2	1403.0	1402.7	1402.4	1402.2	1401.9	1401.7	1401.4	1401.1	1400.9	1401.7
162.5°	1425.7	1425.0	1424.4	1423.7	1423.0	1422.6	1422.3	1422.1	1421.8	1421.5	1422.9
165°	1456.0	1455.2	1454.4	1453.7	1452.9	1452.2	1451.7	1451.2	1450.7	1450.2	1451.7
167.5°	1479.3	1478.1	1477.0	1475.9	1474.9	1474.3	1474.4	1474.4	1474.5	1474.5	1476.1
170°	1492.4	1491.1	1489.8	1488.4	1487.1	1486.6	1486.9	1487.1	1487.4	1487.7	1489.2
172.5°	1501.8	1500.7	1499.5	1498.4	1497.4	1496.8	1496.9	1497.0	1497.0	1497.1	1498.8
175°	1514.7	1513.4	1512.1	1510.8	1509.4	1508.6	1508.4	1508.1	1507.9	1507.6	1509.4
177.5°	1518.9	1517.8	1516.8	1515.8	1514.7	1514.2	1514.2	1514.2	1514.2	1514.2	1515.7
180°	1517.0	1517.0	1517.0	1517.0	1517.0	1517.0	1517.0	1517.0	1517.0	1517.0	1517.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	426.9	426.9	426.9	426.9	426.9	426.9	426.9	426.9
2.5°	425.4	426.0	426.6	426.8	426.8	426.7	426.6	426.5
5°	424.2	425.1	426.0	426.4	426.3	426.1	426.0	425.9
7.5°	422.0	422.9	423.9	424.3	424.2	424.1	424.0	423.9
10°	419.7	420.6	421.6	422.0	421.9	421.8	421.7	421.6
12.5°	416.5	417.4	418.2	418.6	418.6	418.6	418.6	418.5
15°	410.6	411.5	412.5	412.9	412.8	412.7	412.6	412.5
17.5°	403.4	404.5	405.5	405.9	405.8	405.7	405.7	405.6
20°	397.9	399.0	400.0	400.6	400.6	400.6	400.6	400.6
22.5°	391.4	392.4	393.5	394.2	394.4	394.5	394.7	394.9
25°	381.4	382.5	383.7	384.4	384.5	384.6	384.7	384.8
27.5°	370.1	371.2	372.3	372.9	373.0	373.1	373.2	373.4
30°	362.2	363.5	364.6	365.3	365.5	365.8	366.0	366.2
32.5°	354.2	355.6	356.9	357.7	357.9	358.1	358.3	358.5
35°	341.4	342.8	344.4	345.3	345.6	345.9	346.3	346.6
37.5°	328.1	329.5	331.0	332.0	332.3	332.6	333.1	333.4
40°	318.7	320.2	321.8	322.9	323.3	323.8	324.2	324.6
42.5°	309.4	311.2	313.0	314.1	314.4	314.7	315.1	315.4
45°	295.2	297.0	298.8	299.9	300.5	301.0	301.5	302.1
47.5°	280.1	282.0	283.9	285.1	285.8	286.4	287.0	287.7
50°	269.5	271.7	273.8	275.2	275.8	276.4	277.1	277.7
52.5°	258.8	260.9	263.1	264.5	265.1	265.7	266.4	267.0
55°	242.8	244.9	247.0	248.4	249.0	249.6	250.3	251.0
57.5°	225.9	228.4	231.0	232.5	233.1	233.7	234.3	234.9
60°	214.3	216.7	219.1	220.8	221.7	222.5	223.4	224.2
62.5°	202.8	205.2	207.6	209.3	210.2	211.0	211.9	212.7
65°	185.0	187.7	190.4	192.1	193.0	193.8	194.7	195.5
67.5°	167.6	170.4	173.0	174.8	175.6	176.4	177.2	178.1
70°	155.3	158.2	161.1	162.9	163.6	164.4	165.1	165.8
72.5°	143.7	146.5	149.3	151.1	151.9	152.7	153.6	154.4
75°	125.9	128.9	131.9	133.8	134.8	135.7	136.7	137.6
77.5°	109.4	112.4	115.4	117.4	118.5	119.5	120.5	121.5
80°	98.7	101.8	105.0	107.0	107.9	108.8	109.6	110.4
82.5°	88.1	91.4	94.6	96.7	97.7	98.6	99.6	100.5
85°	73.3	76.4	79.7	81.8	82.8	83.9	84.9	86.0
87.5°	66.6	69.9	73.3	75.5	76.5	77.7	78.7	79.7
90°	82.4	87.1	91.7	94.7	96.1	97.5	98.9	100.2
92.5°	99.4	103.3	107.2	109.8	111.0	112.1	113.3	114.4
95°	138.0	141.7	145.3	147.6	148.7	149.6	150.6	151.5
97.5°	187.1	190.8	194.5	196.8	197.7	198.6	199.5	200.5
100°	222.6	226.0	229.4	231.5	232.2	233.0	233.7	234.4
102.5°	260.3	263.9	267.4	269.6	270.7	271.8	272.8	273.8
105°	317.7	321.1	324.6	327.1	328.7	330.3	331.9	333.6
107.5°	380.2	383.5	386.9	388.9	389.6	390.3	391.0	391.7
110°	421.8	423.7	425.7	427.4	429.0	430.7	432.3	433.9



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CATALOG NUMBER: S124DIP-S350D1205U840-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	466.6	468.8	471.0	472.6	473.6	474.6	475.6	476.7
115°	535.8	537.9	540.0	541.3	541.7	542.2	542.7	543.2
117.5°	602.1	603.4	604.7	605.5	605.9	606.2	606.5	606.8
120°	647.0	647.8	648.6	649.7	651.2	652.5	653.9	655.2
122.5°	692.9	694.1	695.4	695.9	695.7	695.5	695.4	695.2
125°	760.2	761.7	763.3	764.1	764.2	764.3	764.4	764.5
127.5°	824.0	825.4	826.8	827.7	828.0	828.3	828.6	828.9
130°	869.0	870.4	871.8	872.3	871.9	871.5	871.1	870.7
132.5°	911.4	912.7	914.0	914.8	915.0	915.2	915.4	915.7
135°	974.6	975.7	976.9	977.4	977.3	977.1	977.0	976.8
137.5°	1036.1	1036.9	1037.8	1038.6	1039.3	1040.0	1040.7	1041.4
140°	1076.7	1077.8	1078.9	1079.6	1079.9	1080.3	1080.5	1080.8
142.5°	1115.5	1116.6	1117.8	1118.5	1118.9	1119.3	1119.7	1120.1
145°	1174.0	1174.4	1174.8	1174.8	1174.4	1174.1	1173.7	1173.4
147.5°	1227.2	1227.1	1227.0	1227.0	1227.0	1227.1	1227.2	1227.3
150°	1261.2	1261.2	1261.2	1261.1	1260.8	1260.6	1260.3	1260.1
152.5°	1293.4	1294.1	1294.7	1294.7	1294.0	1293.3	1292.6	1292.0
155°	1338.5	1339.5	1340.5	1340.5	1339.5	1338.5	1337.4	1336.4
157.5°	1378.1	1378.8	1379.6	1379.6	1378.7	1377.8	1376.8	1376.0
160°	1402.4	1403.2	1404.0	1403.7	1402.4	1401.1	1399.9	1398.6
162.5°	1424.3	1425.7	1427.1	1427.2	1425.9	1424.6	1423.3	1422.0
165°	1453.3	1454.8	1456.4	1456.6	1455.6	1454.6	1453.5	1452.5
167.5°	1477.6	1479.3	1480.8	1480.8	1479.1	1477.5	1475.9	1474.3
170°	1490.9	1492.4	1494.0	1493.8	1492.0	1490.2	1488.3	1486.5
172.5°	1500.7	1502.4	1504.2	1504.2	1502.3	1500.5	1498.6	1496.8
175°	1511.3	1513.1	1514.9	1514.9	1513.1	1511.3	1509.4	1507.6
177.5°	1517.1	1518.6	1520.0	1519.9	1518.2	1516.6	1514.9	1513.3
180°	1517.0	1517.0	1517.0	1517.0	1517.0	1517.0	1517.0	1517.0

(END OF REPORT)