

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: P332532-840

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332532-840
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-S350D1205U840-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1205 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6388.3 lumens
Efficiency: N/A
Efficacy: 151.4 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

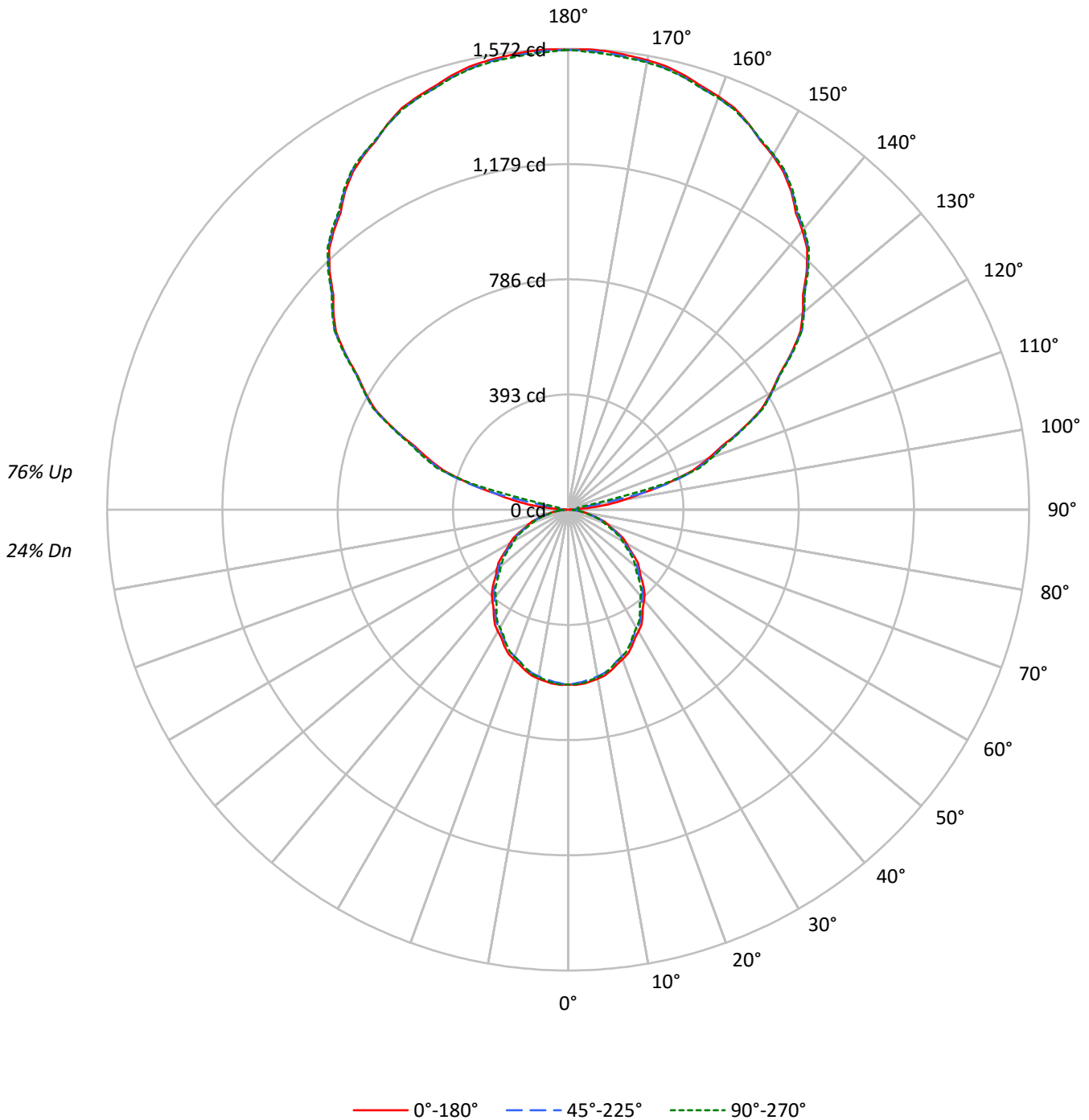
Input Watts (W): 42.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	101	101	101	90	90	90	90	69	69	69	50	50	50	32	32	32	24
1	92	88	84	81	82	78	75	72	60	58	56	44	42	41	28	28	27	20
2	84	77	71	66	74	68	63	59	53	49	46	38	36	34	25	24	23	17
3	76	67	60	55	68	60	54	49	46	42	39	34	31	29	22	21	19	14
4	70	59	52	46	62	53	47	42	41	37	33	30	27	25	20	18	17	12
5	64	53	45	39	56	47	41	36	37	32	28	27	24	21	18	16	14	11
6	59	47	39	34	52	42	36	31	33	28	25	24	21	19	16	14	13	9
7	54	42	35	29	48	38	31	27	30	25	22	22	19	16	15	13	11	8
8	50	38	31	26	44	34	28	23	27	22	19	20	17	14	13	11	10	7
9	46	35	28	23	41	31	25	21	25	20	17	18	15	13	12	10	9	7
10	43	32	25	20	38	29	23	18	23	18	15	17	14	12	11	10	8	6

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4816	4816	4816
5°	4830	4772	4807
10°	4800	4733	4757
15°	4741	4667	4679
20°	4665	4582	4587
25°	4577	4488	4475
30°	4470	4376	4336
35°	4357	4258	4202
40°	4241	4126	4051
45°	4120	3995	3919
50°	3986	3878	3758
55°	3842	3727	3606
60°	3696	3559	3450
65°	3534	3396	3261
70°	3352	3182	3059
75°	3072	2923	2848
80°	2734	2627	2552
85°	2399	2297	2251



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.2	0.9
10°-20°	158.3	2.5
20°-30°	233.0	3.6
30°-40°	270.8	4.2
40°-50°	270.9	4.2
50°-60°	236.9	3.7
60°-70°	175.9	2.8
70°-80°	100.0	1.6
80°-90°	33.4	0.5
90°-100°	53.7	0.8
100°-110°	342.1	5.4
110°-120°	654.5	10.2
120°-130°	830.8	13.0
130°-140°	888.9	13.9
140°-150°	831.2	13.0
150°-160°	670.3	10.5
160°-170°	432.4	6.8
170°-180°	149.0	2.3
0°-30°	447.4	7.0
0°-40°	718.3	11.2
0°-60°	1226.1	19.2
0°-90°	1535.3	24.0
90°-120°	1050.3	16.4
90°-150°	3601.3	56.4
90°-180°	4853.0	76.0
0°-180°	6388.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	596	596	596	596	596	
5°	596	594	589	594	593	57
15°	567	565	558	561	560	160
25°	514	510	504	504	502	236
35°	442	439	432	429	426	276
45°	361	357	350	345	343	278
55°	273	271	265	259	256	244
65°	185	182	178	173	171	183
75°	98	96	94	92	91	105
85°	26	26	25	25	24	28
90°	4	16	26	33	35	4
95°	64	27	26	33	34	83
105°	353	360	366	374	334	370
115°	659	663	662	664	664	649
125°	927	931	929	933	934	827
135°	1150	1149	1154	1156	1158	886
145°	1326	1329	1330	1331	1333	828
155°	1454	1455	1452	1456	1453	670
165°	1534	1528	1528	1536	1527	433
175°	1569	1562	1563	1572	1559	149
180°	1569	1569	1569	1569	1569	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	596.5	596.5	596.5	596.5	596.5	596.5	596.5	596.5	596.5	596.5	596.5
2.5°	598.0	597.8	597.5	597.3	597.0	596.4	595.5	594.6	593.7	592.7	593.6
5°	596.0	595.6	595.2	594.8	594.4	593.6	592.4	591.3	590.1	588.9	590.1
7.5°	590.6	590.1	589.7	589.3	588.9	587.9	586.6	585.4	584.1	582.8	583.7
10°	585.5	585.1	584.7	584.3	583.9	583.0	581.6	580.2	578.9	577.4	578.2
12.5°	579.1	578.7	578.2	577.7	577.3	576.4	574.9	573.5	572.0	570.6	571.5
15°	567.3	566.9	566.5	566.1	565.7	564.7	563.1	561.5	559.9	558.4	559.0
17.5°	553.3	552.8	552.3	551.8	551.2	550.2	548.7	547.1	545.6	544.1	544.5
20°	543.0	542.5	542.0	541.4	540.9	539.9	538.3	536.6	535.0	533.4	533.8
22.5°	531.9	531.2	530.5	529.8	529.1	528.0	526.3	524.8	523.2	521.6	522.2
25°	513.8	513.1	512.4	511.6	510.9	509.8	508.3	506.8	505.3	503.8	503.9
27.5°	493.2	492.4	491.7	490.9	490.2	489.1	487.7	486.4	484.9	483.5	483.3
30°	479.5	478.6	477.8	476.9	476.1	474.9	473.5	472.1	470.8	469.4	469.0
32.5°	464.9	464.1	463.3	462.6	461.8	460.7	459.3	457.8	456.4	454.8	454.3
35°	442.1	441.4	440.7	439.9	439.2	438.1	436.6	435.0	433.6	432.1	431.4
37.5°	418.2	417.5	416.8	416.2	415.5	414.3	412.7	411.1	409.5	407.9	407.1
40°	402.4	401.6	400.8	399.9	399.1	397.9	396.3	394.7	393.0	391.5	390.4
42.5°	385.7	385.2	384.7	384.2	383.6	382.4	380.7	378.9	377.2	375.5	374.2
45°	360.9	360.1	359.4	358.7	357.9	356.7	355.0	353.3	351.6	349.9	348.7
47.5°	335.0	334.5	334.0	333.5	333.0	331.9	330.3	328.7	327.2	325.6	324.3
50°	317.4	317.0	316.6	316.1	315.7	314.8	313.3	311.7	310.2	308.8	307.3
52.5°	300.2	299.6	299.1	298.6	298.1	297.1	295.5	294.0	292.4	290.8	289.5
55°	273.0	272.7	272.3	272.0	271.7	270.7	269.2	267.8	266.3	264.8	263.6
57.5°	246.9	246.6	246.2	245.9	245.5	244.6	243.1	241.7	240.1	238.7	237.5
60°	228.9	228.4	227.9	227.3	226.8	225.9	224.5	223.1	221.8	220.4	219.4
62.5°	211.4	211.0	210.5	210.1	209.5	208.6	207.1	205.7	204.2	202.8	201.9
65°	185.0	184.5	183.9	183.4	182.9	182.1	181.0	180.0	178.8	177.8	176.7
67.5°	158.4	157.9	157.4	156.9	156.4	155.7	154.7	153.7	152.7	151.6	150.6
70°	142.0	141.2	140.5	139.8	139.0	138.1	137.3	136.5	135.6	134.8	133.9
72.5°	124.4	123.6	122.9	122.2	121.4	120.7	120.0	119.4	118.7	118.0	117.2
75°	98.5	98.0	97.5	96.8	96.3	95.8	95.3	94.7	94.2	93.7	93.3
77.5°	73.7	73.5	73.2	73.0	72.8	72.4	72.0	71.5	71.0	70.6	70.4
80°	58.8	58.5	58.2	57.9	57.6	57.3	57.1	56.9	56.7	56.5	56.1
82.5°	44.2	44.1	43.9	43.8	43.6	43.5	43.5	43.5	43.4	43.4	43.3
85°	25.9	25.9	25.9	25.9	25.9	25.8	25.4	25.2	25.0	24.8	24.8
87.5°	10.6	11.1	11.6	12.1	12.6	13.0	13.3	13.6	14.0	14.3	14.6
90°	3.5	6.4	9.3	12.1	14.9	17.5	19.6	21.6	23.7	25.9	27.4
92.5°	14.7	14.9	15.1	15.2	15.5	16.6	18.6	20.7	22.8	24.8	26.5
95°	64.5	55.6	46.8	38.0	29.1	24.7	25.0	25.2	25.5	25.9	27.4
97.5°	137.0	142.6	148.1	153.6	159.2	147.3	118.3	89.2	60.1	31.0	31.1
100°	192.5	197.1	201.9	206.5	211.3	195.6	159.6	123.6	87.7	51.6	47.2
102.5°	254.4	257.8	261.3	264.7	268.1	267.5	262.9	258.1	253.5	248.7	201.0
105°	353.1	354.8	356.3	357.9	359.4	360.9	362.2	363.5	364.8	366.1	368.5
107.5°	444.9	445.8	446.6	447.3	448.1	449.4	451.1	452.9	454.6	456.5	457.6
110°	507.0	507.7	508.5	509.3	510.1	511.2	512.8	514.3	515.9	517.5	518.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	567.0	568.5	569.8	571.2	572.6	573.7	574.4	575.1	575.9	576.6	576.5
115°	659.4	660.2	661.1	661.8	662.6	662.9	662.6	662.4	662.1	661.8	662.4
117.5°	742.8	743.8	744.9	745.9	746.9	747.7	748.3	748.9	749.5	750.0	749.9
120°	799.1	800.1	801.2	802.2	803.2	803.7	803.4	803.1	802.8	802.6	803.1
122.5°	851.6	852.3	852.9	853.5	854.1	854.6	855.1	855.4	855.8	856.2	856.5
125°	927.0	928.1	929.1	930.1	931.2	931.4	930.9	930.4	929.9	929.4	930.1
127.5°	998.4	998.6	998.9	999.2	999.4	1000.1	1001.3	1002.5	1003.7	1004.9	1004.7
130°	1044.3	1044.6	1044.9	1045.1	1045.4	1045.9	1046.7	1047.4	1048.2	1049.0	1049.2
132.5°	1086.6	1087.0	1087.5	1088.0	1088.4	1089.2	1090.1	1091.2	1092.2	1093.2	1093.4
135°	1149.9	1149.7	1149.4	1149.1	1148.9	1149.3	1150.3	1151.3	1152.5	1153.5	1154.0
137.5°	1206.1	1206.2	1206.3	1206.4	1206.5	1207.1	1208.2	1209.4	1210.5	1211.6	1212.2
140°	1242.6	1243.1	1243.6	1244.3	1244.8	1245.3	1245.8	1246.3	1246.8	1247.4	1248.1
142.5°	1275.5	1276.5	1277.4	1278.3	1279.3	1279.9	1280.2	1280.5	1280.8	1281.1	1281.7
145°	1326.0	1326.8	1327.6	1328.3	1329.1	1329.5	1329.5	1329.5	1329.5	1329.5	1329.8
147.5°	1366.0	1367.6	1369.0	1370.5	1371.9	1372.5	1372.3	1372.0	1371.7	1371.5	1371.7
150°	1395.2	1396.2	1397.2	1398.4	1399.4	1399.8	1399.5	1399.3	1399.0	1398.7	1398.7
152.5°	1419.6	1420.5	1421.3	1422.1	1422.9	1423.1	1422.7	1422.2	1421.7	1421.3	1421.7
155°	1453.9	1454.1	1454.4	1454.6	1454.9	1454.6	1453.9	1453.1	1452.3	1451.5	1452.6
157.5°	1482.7	1482.6	1482.4	1482.3	1482.1	1481.6	1480.7	1479.9	1478.9	1478.0	1479.4
160°	1499.6	1498.8	1498.0	1497.3	1496.5	1496.0	1495.7	1495.4	1495.2	1494.9	1496.5
162.5°	1514.6	1513.7	1512.7	1511.7	1510.7	1510.1	1509.7	1509.5	1509.2	1509.0	1510.6
165°	1533.7	1532.4	1531.1	1529.7	1528.4	1527.8	1527.8	1527.8	1527.8	1527.8	1529.8
167.5°	1548.6	1547.3	1546.0	1544.6	1543.3	1542.5	1542.4	1542.2	1542.1	1541.9	1544.2
170°	1557.1	1555.6	1554.0	1552.5	1550.8	1550.2	1550.4	1550.7	1551.0	1551.3	1553.4
172.5°	1562.8	1561.2	1559.6	1558.0	1556.5	1555.8	1556.1	1556.4	1556.6	1556.9	1558.9
175°	1568.8	1567.3	1565.7	1564.2	1562.6	1562.0	1562.2	1562.5	1562.8	1563.0	1565.3
177.5°	1571.7	1570.2	1568.7	1567.3	1565.8	1565.3	1565.7	1566.1	1566.6	1567.0	1568.6
180°	1568.8	1568.8	1568.8	1568.8	1568.8	1568.8	1568.8	1568.8	1568.8	1568.8	1568.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	596.5	596.5	596.5	596.5	596.5	596.5	596.5	596.5
2.5°	594.4	595.3	596.1	596.5	596.4	596.3	596.2	596.1
5°	591.3	592.4	593.6	594.0	593.8	593.6	593.4	593.2
7.5°	584.6	585.6	586.5	586.9	586.8	586.6	586.5	586.4
10°	579.2	580.0	580.9	581.2	581.0	580.7	580.5	580.3
12.5°	572.4	573.3	574.3	574.6	574.3	574.0	573.7	573.4
15°	559.6	560.2	560.9	561.0	560.7	560.4	560.1	559.8
17.5°	544.9	545.3	545.7	545.8	545.6	545.4	545.2	545.0
20°	534.1	534.4	534.7	534.8	534.5	534.3	534.1	533.9
22.5°	522.7	523.3	523.9	524.0	523.6	523.2	522.8	522.5
25°	504.0	504.1	504.2	504.1	503.6	503.2	502.8	502.4
27.5°	483.0	482.8	482.5	482.1	481.6	481.1	480.5	480.0
30°	468.6	468.2	467.7	467.3	466.7	466.2	465.6	465.1
32.5°	453.8	453.3	452.8	452.3	451.8	451.2	450.7	450.2
35°	430.6	429.9	429.1	428.5	428.0	427.5	426.9	426.4
37.5°	406.3	405.5	404.7	403.9	403.2	402.5	401.8	401.1
40°	389.4	388.3	387.3	386.5	385.9	385.4	384.9	384.4
42.5°	372.9	371.7	370.5	369.7	369.3	369.0	368.6	368.3
45°	347.6	346.4	345.3	344.5	344.2	343.9	343.6	343.3
47.5°	323.0	321.6	320.3	319.3	318.5	317.7	316.9	316.1
50°	305.8	304.4	302.9	301.7	301.1	300.5	299.8	299.2
52.5°	288.2	286.9	285.6	284.5	283.7	282.9	282.1	281.2
55°	262.3	260.9	259.7	258.7	258.1	257.5	256.8	256.2
57.5°	236.3	235.1	233.9	233.0	232.4	231.8	231.2	230.5
60°	218.4	217.5	216.5	215.8	215.3	214.7	214.2	213.7
62.5°	201.1	200.2	199.2	198.5	198.0	197.5	197.0	196.4
65°	175.7	174.6	173.6	172.8	172.3	171.7	171.2	170.7
67.5°	149.6	148.6	147.5	146.9	146.8	146.6	146.5	146.3
70°	133.1	132.3	131.4	130.8	130.5	130.2	129.9	129.6
72.5°	116.6	115.9	115.2	114.7	114.4	114.1	113.8	113.5
75°	92.8	92.4	92.0	91.7	91.6	91.5	91.4	91.3
77.5°	70.3	70.2	70.1	69.9	69.6	69.3	69.0	68.8
80°	55.9	55.7	55.5	55.4	55.2	55.1	55.0	54.9
82.5°	43.1	43.0	42.9	42.8	42.7	42.5	42.4	42.3
85°	24.8	24.8	24.8	24.8	24.7	24.6	24.4	24.3
87.5°	14.9	15.2	15.6	15.8	15.9	16.1	16.2	16.3
90°	29.0	30.5	32.1	33.1	33.6	34.1	34.6	35.2
92.5°	28.0	29.6	31.1	32.0	32.1	32.2	32.3	32.4
95°	29.0	30.5	32.1	33.0	33.2	33.5	33.7	34.0
97.5°	31.3	31.4	31.6	31.8	32.1	32.3	32.6	32.8
100°	42.7	38.4	33.9	31.8	32.1	32.3	32.6	32.8
102.5°	153.1	105.3	57.5	33.6	33.6	33.7	33.7	33.8
105°	370.8	373.1	375.5	371.9	362.5	353.1	343.9	334.5
107.5°	458.8	459.9	461.0	462.1	463.1	464.1	465.0	466.1
110°	518.6	519.1	519.6	520.2	521.0	521.8	522.6	523.3



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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	576.4	576.3	576.2	576.6	577.6	578.7	579.7	580.6
115°	662.9	663.4	663.9	664.2	664.2	664.2	664.2	664.2
117.5°	749.8	749.7	749.6	749.5	749.4	749.3	749.2	749.1
120°	803.7	804.2	804.7	804.7	804.2	803.7	803.1	802.6
122.5°	856.8	857.1	857.4	857.3	856.8	856.3	855.7	855.2
125°	930.9	931.7	932.5	933.0	933.2	933.5	933.8	934.0
127.5°	1004.6	1004.4	1004.3	1004.1	1003.9	1003.7	1003.5	1003.3
130°	1049.6	1049.9	1050.1	1050.2	1050.2	1050.2	1050.2	1050.2
132.5°	1093.7	1094.0	1094.2	1094.2	1094.0	1093.8	1093.6	1093.4
135°	1154.5	1155.0	1155.6	1156.1	1156.6	1157.1	1157.6	1158.1
137.5°	1212.8	1213.4	1214.0	1214.2	1214.1	1213.9	1213.7	1213.6
140°	1248.9	1249.7	1250.5	1251.0	1251.2	1251.5	1251.7	1252.0
142.5°	1282.3	1282.8	1283.4	1283.7	1283.8	1283.8	1283.9	1283.9
145°	1330.0	1330.3	1330.5	1330.9	1331.4	1331.9	1332.5	1333.0
147.5°	1371.9	1372.1	1372.3	1372.5	1372.8	1373.1	1373.3	1373.6
150°	1398.7	1398.7	1398.7	1398.9	1399.1	1399.4	1399.7	1399.9
152.5°	1422.1	1422.5	1422.9	1423.0	1422.9	1422.7	1422.6	1422.4
155°	1453.6	1454.6	1455.7	1455.8	1455.0	1454.2	1453.5	1452.7
157.5°	1480.8	1482.1	1483.5	1483.5	1482.1	1480.8	1479.4	1478.0
160°	1498.0	1499.6	1501.2	1501.2	1499.6	1498.0	1496.5	1494.9
162.5°	1512.2	1513.7	1515.3	1515.2	1513.4	1511.7	1509.8	1508.0
165°	1532.0	1534.1	1536.1	1536.0	1533.7	1531.3	1528.9	1526.6
167.5°	1546.5	1548.7	1551.1	1550.8	1548.3	1545.7	1543.1	1540.4
170°	1555.4	1557.5	1559.6	1559.3	1556.7	1554.1	1551.6	1548.9
172.5°	1561.0	1563.2	1565.2	1564.9	1562.1	1559.2	1556.4	1553.6
175°	1567.7	1570.0	1572.4	1572.0	1568.8	1565.7	1562.6	1559.4
177.5°	1570.3	1572.0	1573.7	1573.3	1570.7	1568.2	1565.7	1563.3
180°	1568.8	1568.8	1568.8	1568.8	1568.8	1568.8	1568.8	1568.8

(END OF REPORT)