

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: P332759

Luminaire Tested: **S124DIW-S575D1050U835-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332759
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-S575D1050U835-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1050 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6562.9 lumens
Efficiency: N/A
Efficacy: 145.2 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

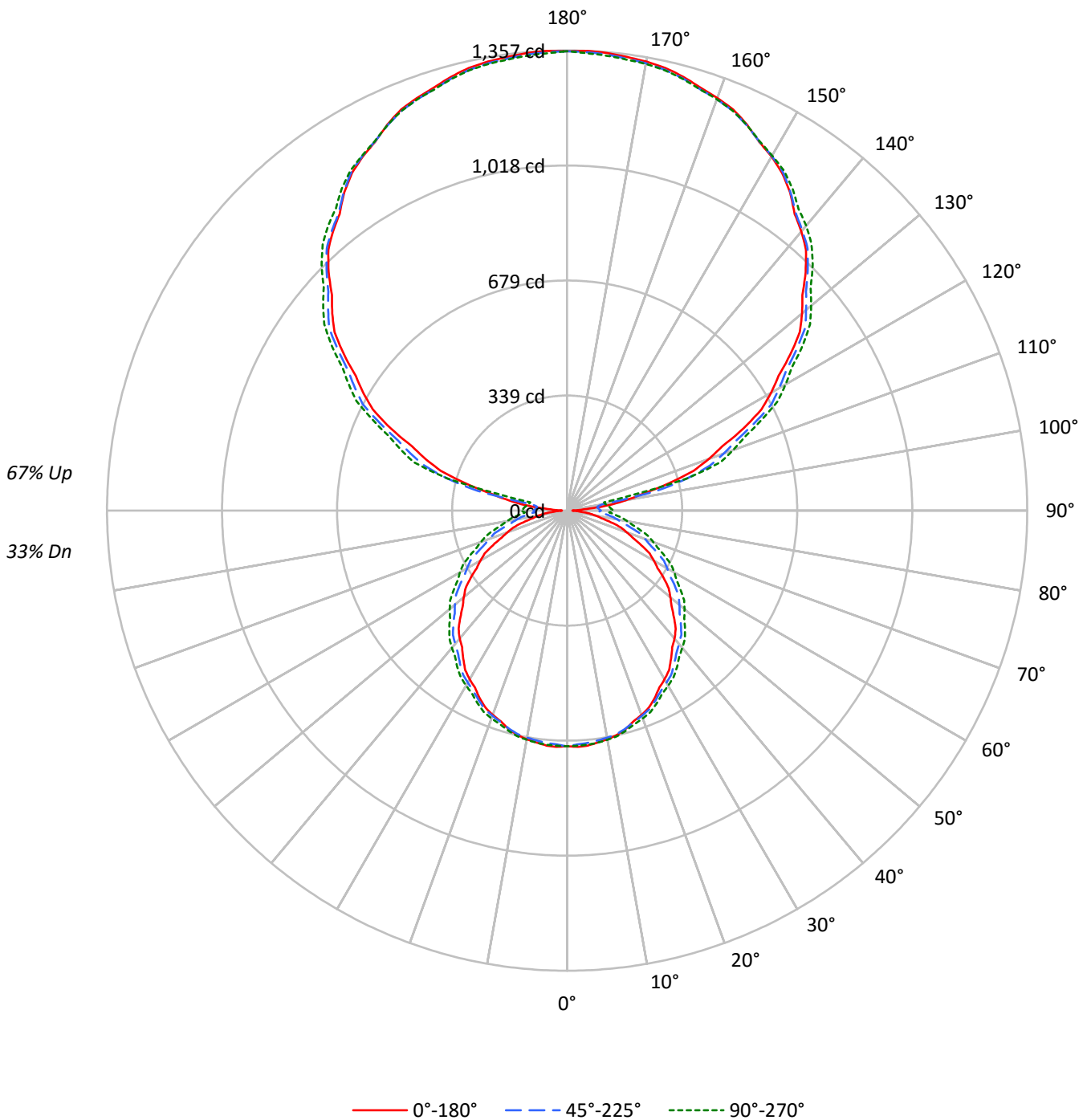
Input Watts (W): 45.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	103	103	103	103	93	93	93	93	74	74	74	57	57	57	41	41	41	33
1	93	89	85	81	84	80	77	74	64	61	59	49	47	46	35	34	33	27
2	85	77	71	66	76	70	64	60	55	52	48	42	40	38	30	29	27	22
3	77	68	60	54	69	61	55	50	49	44	40	37	34	31	27	25	23	18
4	70	60	52	46	63	54	47	42	43	38	34	33	30	27	24	21	20	15
5	64	53	45	39	58	48	41	36	38	33	29	29	26	23	21	19	17	13
6	59	47	39	33	53	43	36	31	34	29	25	27	23	20	19	17	15	11
7	55	42	35	29	49	38	32	27	31	26	22	24	20	17	17	15	13	10
8	51	38	31	25	45	35	28	23	28	23	19	22	18	15	16	13	12	9
9	47	35	27	22	42	32	25	21	26	21	17	20	16	14	15	12	10	8
10	44	32	25	20	39	29	23	18	24	19	15	18	15	12	14	11	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5610	5610	5610
5°	5628	5483	5498
10°	5593	5393	5388
15°	5543	5289	5260
20°	5467	5175	5135
25°	5382	5046	4997
30°	5290	4919	4856
35°	5185	4787	4732
40°	5102	4663	4603
45°	4978	4549	4492
50°	4873	4416	4375
55°	4765	4291	4237
60°	4596	4132	4112
65°	4410	3962	3958
70°	4186	3768	3778
75°	3872	3553	3616
80°	3526	3347	3457
85°	3082	3163	3364



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.8	1.0
10°-20°	188.5	2.9
20°-30°	285.1	4.3
30°-40°	344.9	5.3
40°-50°	364.7	5.6
50°-60°	343.2	5.2
60°-70°	284.7	4.3
70°-80°	200.0	3.0
80°-90°	117.0	1.8
90°-100°	113.5	1.7
100°-110°	345.1	5.3
110°-120°	598.5	9.1
120°-130°	736.2	11.2
130°-140°	775.7	11.8
140°-150°	719.4	11.0
150°-160°	578.8	8.8
160°-170°	373.3	5.7
170°-180°	128.7	2.0
0°-30°	539.4	8.2
0°-40°	884.4	13.5
0°-60°	1592.2	24.3
0°-90°	2193.9	33.4
90°-120°	1057.0	16.1
90°-150°	3288.3	50.1
90°-180°	4369.0	66.6
0°-180°	6562.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	695	695	695	695	695	
5°	696	693	688	694	693	66
15°	667	668	665	672	672	188
25°	610	615	617	625	626	281
35°	534	543	551	561	564	334
45°	445	460	475	487	492	344
55°	349	365	388	403	408	311
65°	241	266	293	311	318	239
75°	134	163	195	216	224	142
85°	41	74	109	131	140	44
90°	16	58	99	127	136	11
95°	66	59	90	116	125	80
105°	312	334	368	393	366	327
115°	574	585	608	626	633	565
125°	804	808	824	841	848	717
135°	994	994	1003	1017	1024	766
145°	1146	1148	1148	1154	1159	716
155°	1255	1256	1253	1257	1254	579
165°	1324	1319	1319	1326	1318	374
175°	1355	1349	1350	1358	1346	129
180°	1355	1355	1355	1355	1355	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9
2.5°	697.4	697.0	696.6	696.1	695.7	695.0	693.9	692.8	691.6	690.5	691.5
5°	695.7	695.2	694.6	694.1	693.6	692.7	691.5	690.3	689.1	687.9	689.3
7.5°	689.8	689.4	689.1	688.8	688.5	687.9	686.9	685.9	684.8	683.8	685.4
10°	684.8	684.6	684.4	684.3	684.1	683.6	682.7	681.8	681.0	680.1	681.7
12.5°	677.9	677.9	677.9	677.8	677.8	677.5	676.9	676.3	675.7	675.1	676.5
15°	666.9	667.1	667.2	667.4	667.6	667.4	666.9	666.4	665.8	665.3	666.9
17.5°	651.8	652.3	652.8	653.3	653.9	654.1	654.0	653.9	653.8	653.7	655.2
20°	641.2	641.7	642.2	642.8	643.3	643.6	643.8	644.0	644.1	644.3	646.0
22.5°	629.4	630.0	630.7	631.3	632.0	632.5	632.8	633.1	633.4	633.7	635.5
25°	610.1	611.1	612.2	613.2	614.2	615.0	615.5	616.0	616.6	617.1	619.0
27.5°	588.6	590.1	591.6	593.2	594.7	595.8	596.6	597.4	598.2	599.0	600.8
30°	574.3	575.7	577.0	578.4	579.8	581.1	582.3	583.5	584.7	586.0	587.9
32.5°	558.7	560.4	562.0	563.7	565.4	566.9	568.2	569.6	570.9	572.3	574.4
35°	533.8	535.9	538.0	540.0	542.1	544.0	545.7	547.5	549.2	550.9	553.4
37.5°	508.8	511.1	513.5	515.9	518.3	520.6	522.7	524.9	527.0	529.1	531.6
40°	492.6	494.8	497.1	499.3	501.6	503.9	506.3	508.7	511.2	513.6	516.2
42.5°	473.9	476.4	478.9	481.5	484.0	486.7	489.5	492.3	495.2	498.0	500.9
45°	445.1	448.4	451.7	455.0	458.2	461.5	464.8	468.1	471.4	474.7	477.6
47.5°	417.6	420.9	424.3	427.7	431.1	434.7	438.5	442.3	446.1	449.9	453.0
50°	397.6	401.4	405.2	409.1	412.9	416.7	420.5	424.3	428.1	431.9	435.3
52.5°	377.7	381.5	385.3	389.1	392.9	397.0	401.4	405.7	410.1	414.4	417.9
55°	348.6	352.2	355.9	359.5	363.1	367.5	372.7	377.9	383.1	388.3	391.8
57.5°	316.1	320.6	325.1	329.6	334.1	338.9	344.0	349.2	354.4	359.5	363.6
60°	294.9	299.4	303.9	308.4	312.9	318.0	323.7	329.4	335.1	340.8	344.8
62.5°	274.4	279.3	284.2	289.1	294.0	299.3	305.0	310.7	316.5	322.2	326.1
65°	241.2	246.8	252.3	257.8	263.4	269.1	274.9	280.8	286.7	292.6	296.9
67.5°	209.3	215.2	221.1	227.0	232.8	238.9	245.2	251.5	257.8	264.1	268.5
70°	187.5	193.4	199.3	205.2	211.1	217.3	223.8	230.4	237.0	243.6	248.2
72.5°	166.4	172.4	178.4	184.4	190.4	196.9	203.9	210.9	217.9	224.9	229.4
75°	133.8	140.2	146.6	153.0	159.4	166.3	173.5	180.8	188.1	195.3	200.2
77.5°	103.5	110.3	117.1	123.8	130.6	137.8	145.4	153.0	160.6	168.2	173.1
80°	84.8	91.7	98.7	105.6	112.5	119.7	127.4	135.0	142.6	150.2	155.4
82.5°	66.1	73.3	80.5	87.7	94.9	102.3	109.9	117.5	125.1	132.8	138.1
85°	41.2	48.5	55.8	63.0	70.3	77.8	85.6	93.4	101.2	108.9	114.1
87.5°	23.6	31.2	38.7	46.3	53.8	61.6	69.5	77.5	85.4	93.3	98.6
90°	15.5	24.9	34.3	43.7	53.1	62.4	71.6	80.9	90.1	99.3	105.7
92.5°	24.6	31.0	37.3	43.7	50.0	57.8	67.1	76.3	85.5	94.8	101.0
95°	65.8	63.9	61.9	60.0	58.0	60.7	68.0	75.4	82.7	90.0	96.0
97.5°	127.5	137.2	146.9	156.6	166.3	162.0	143.9	125.8	107.7	89.6	94.3
100°	174.7	183.3	191.8	200.4	208.9	201.0	176.7	152.4	128.0	103.7	104.6
102.5°	228.2	235.1	242.0	249.0	255.9	260.6	263.2	265.7	268.3	270.8	234.1
105°	312.0	316.8	321.6	326.4	331.2	337.4	344.9	352.4	359.9	367.5	373.8
107.5°	391.0	394.6	398.1	401.6	405.1	410.6	418.2	425.8	433.4	441.0	446.2
110°	443.9	447.0	450.1	453.2	456.3	461.6	469.0	476.4	483.8	491.2	495.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	495.2	498.5	501.9	505.3	508.6	513.5	519.9	526.3	532.7	539.1	542.9
115°	574.1	576.3	578.5	580.8	583.0	586.8	592.1	597.4	602.7	608.0	612.3
117.5°	645.9	647.7	649.5	651.4	653.2	656.9	662.6	668.2	673.9	679.5	683.0
120°	693.9	695.3	696.7	698.1	699.5	702.6	707.4	712.2	717.0	721.8	725.7
122.5°	739.3	739.9	740.5	741.2	741.8	744.7	749.7	754.8	759.8	764.9	768.6
125°	803.5	804.3	805.0	805.7	806.4	808.7	812.6	816.5	820.4	824.2	828.2
127.5°	865.0	865.0	865.1	865.1	865.2	867.4	871.7	876.1	880.4	884.8	887.8
130°	904.1	904.1	904.2	904.2	904.3	906.0	909.5	912.9	916.3	919.8	923.1
132.5°	940.5	940.8	941.0	941.2	941.5	943.1	946.2	949.3	952.3	955.4	958.6
135°	994.5	994.2	994.0	993.8	993.6	994.5	996.6	998.7	1000.8	1003.0	1006.2
137.5°	1042.9	1042.8	1042.7	1042.7	1042.6	1043.3	1044.9	1046.5	1048.1	1049.6	1052.7
140°	1074.5	1074.8	1075.1	1075.3	1075.6	1076.1	1076.7	1077.3	1077.9	1078.6	1081.5
142.5°	1102.3	1103.0	1103.8	1104.6	1105.4	1105.8	1106.0	1106.2	1106.3	1106.5	1109.0
145°	1145.7	1146.2	1146.7	1147.2	1147.7	1147.9	1147.9	1147.9	1147.9	1147.9	1149.2
147.5°	1180.3	1181.4	1182.5	1183.6	1184.7	1185.1	1184.9	1184.7	1184.4	1184.2	1184.5
150°	1205.4	1206.2	1206.9	1207.6	1208.4	1208.6	1208.4	1208.2	1207.9	1207.7	1207.7
152.5°	1225.9	1226.6	1227.3	1228.0	1228.6	1228.8	1228.4	1228.0	1227.6	1227.2	1227.5
155°	1255.3	1255.6	1255.8	1256.0	1256.2	1256.0	1255.3	1254.7	1254.0	1253.3	1254.2
157.5°	1280.3	1280.1	1280.0	1279.8	1279.7	1279.3	1278.5	1277.7	1277.0	1276.2	1277.4
160°	1294.8	1294.2	1293.5	1292.8	1292.1	1291.7	1291.5	1291.2	1291.0	1290.8	1292.1
162.5°	1307.8	1307.0	1306.1	1305.2	1304.4	1303.8	1303.6	1303.4	1303.2	1302.9	1304.3
165°	1324.2	1323.1	1322.0	1320.8	1319.7	1319.2	1319.2	1319.2	1319.2	1319.2	1321.0
167.5°	1337.2	1336.0	1334.9	1333.7	1332.5	1331.9	1331.7	1331.6	1331.5	1331.3	1333.3
170°	1344.5	1343.1	1341.8	1340.4	1339.1	1338.5	1338.7	1339.0	1339.2	1339.4	1341.2
172.5°	1349.3	1348.0	1346.6	1345.3	1343.9	1343.4	1343.6	1343.8	1344.1	1344.3	1346.1
175°	1354.6	1353.3	1351.9	1350.6	1349.2	1348.7	1348.9	1349.1	1349.3	1349.6	1351.6
177.5°	1357.0	1355.8	1354.5	1353.3	1352.0	1351.6	1351.9	1352.3	1352.6	1353.0	1354.4
180°	1354.6	1354.6	1354.6	1354.6	1354.6	1354.6	1354.6	1354.6	1354.6	1354.6	1354.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9
2.5°	692.5	693.4	694.4	694.8	694.7	694.5	694.4	694.3
5°	690.7	692.0	693.4	694.0	693.9	693.7	693.5	693.3
7.5°	687.0	688.5	690.1	690.8	690.6	690.4	690.2	690.1
10°	683.2	684.8	686.3	687.0	686.9	686.7	686.5	686.3
12.5°	678.0	679.4	680.8	681.5	681.5	681.4	681.4	681.4
15°	668.4	670.0	671.5	672.2	672.1	671.9	671.7	671.5
17.5°	656.8	658.4	660.0	660.7	660.6	660.5	660.3	660.2
20°	647.8	649.5	651.2	652.1	652.1	652.1	652.1	652.1
22.5°	637.2	638.9	640.6	641.7	641.9	642.2	642.5	642.8
25°	620.9	622.8	624.7	625.7	625.9	626.1	626.2	626.4
27.5°	602.6	604.3	606.1	607.1	607.3	607.5	607.7	607.9
30°	589.8	591.7	593.6	594.7	595.0	595.4	595.7	596.1
32.5°	576.6	578.8	581.0	582.2	582.6	582.9	583.3	583.6
35°	555.8	558.2	560.6	562.1	562.6	563.1	563.6	564.2
37.5°	534.1	536.5	539.0	540.5	541.0	541.6	542.1	542.7
40°	518.8	521.4	524.0	525.6	526.3	527.0	527.7	528.4
42.5°	503.8	506.6	509.5	511.2	511.8	512.3	512.9	513.4
45°	480.6	483.5	486.4	488.3	489.2	490.1	490.9	491.8
47.5°	456.0	459.1	462.1	464.1	465.2	466.2	467.3	468.3
50°	438.8	442.3	445.7	448.0	449.0	450.0	451.1	452.1
52.5°	421.4	424.8	428.3	430.5	431.6	432.6	433.6	434.7
55°	395.2	398.7	402.1	404.4	405.4	406.5	407.5	408.5
57.5°	367.7	371.9	376.0	378.5	379.5	380.4	381.4	382.4
60°	348.8	352.8	356.7	359.4	360.8	362.2	363.6	365.0
62.5°	330.1	334.1	338.1	340.7	342.1	343.5	344.9	346.3
65°	301.2	305.6	309.9	312.7	314.1	315.5	316.9	318.3
67.5°	272.9	277.3	281.7	284.5	285.9	287.2	288.6	289.9
70°	252.9	257.6	262.2	265.2	266.4	267.6	268.8	270.0
72.5°	233.9	238.5	243.0	245.9	247.3	248.6	250.0	251.3
75°	205.0	209.8	214.7	217.9	219.4	221.0	222.6	224.1
77.5°	178.1	183.0	187.9	191.2	192.8	194.5	196.1	197.8
80°	160.6	165.7	170.9	174.2	175.6	177.0	178.4	179.8
82.5°	143.4	148.7	154.1	157.5	159.0	160.5	162.0	163.6
85°	119.3	124.5	129.7	133.2	134.9	136.6	138.3	140.1
87.5°	103.9	109.2	114.5	117.9	119.5	121.1	122.7	124.4
90°	112.1	118.4	124.8	128.9	130.7	132.6	134.4	136.2
92.5°	107.2	113.5	119.7	123.5	125.0	126.5	128.0	129.4
95°	102.0	108.0	114.1	118.0	119.8	121.5	123.3	125.1
97.5°	99.0	103.6	108.3	111.5	113.2	114.9	116.6	118.3
100°	105.4	106.2	107.1	108.2	109.7	111.1	112.5	114.0
102.5°	197.3	160.5	123.8	106.1	107.5	108.9	110.3	111.7
105°	380.2	386.5	392.9	392.7	386.0	379.2	372.5	365.8
107.5°	451.5	456.7	461.9	465.6	467.7	469.8	471.9	474.0
110°	500.0	504.4	508.9	512.1	514.2	516.2	518.3	520.4



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CATALOG NUMBER: S124DIW-S575D1050U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	546.6	550.4	554.1	557.1	559.3	561.6	563.8	566.1
115°	616.5	620.8	625.0	627.8	629.0	630.2	631.4	632.6
117.5°	686.5	690.0	693.6	696.0	697.2	698.5	699.8	701.1
120°	729.6	733.5	737.4	739.9	740.8	741.7	742.7	743.6
122.5°	772.4	776.1	779.8	782.1	782.9	783.7	784.5	785.2
125°	832.1	836.1	840.1	842.7	843.9	845.2	846.5	847.7
127.5°	890.8	893.7	896.7	898.7	899.7	900.7	901.7	902.7
130°	926.5	929.8	933.1	935.3	936.4	937.4	938.4	939.5
132.5°	961.8	965.0	968.2	970.2	971.1	971.9	972.8	973.6
135°	1009.4	1012.6	1015.8	1018.2	1019.7	1021.2	1022.6	1024.1
137.5°	1055.7	1058.7	1061.7	1063.6	1064.3	1065.0	1065.8	1066.5
140°	1084.4	1087.3	1090.3	1092.3	1093.4	1094.4	1095.5	1096.6
142.5°	1111.4	1113.9	1116.4	1118.0	1118.8	1119.5	1120.3	1121.1
145°	1150.5	1151.7	1153.0	1154.2	1155.3	1156.5	1157.6	1158.8
147.5°	1184.8	1185.2	1185.5	1186.0	1186.8	1187.6	1188.4	1189.1
150°	1207.7	1207.7	1207.7	1207.8	1208.0	1208.3	1208.5	1208.7
152.5°	1227.9	1228.2	1228.6	1228.7	1228.6	1228.4	1228.3	1228.2
155°	1255.1	1256.0	1256.9	1257.0	1256.3	1255.7	1255.0	1254.3
157.5°	1278.5	1279.7	1280.9	1280.9	1279.7	1278.5	1277.4	1276.2
160°	1293.5	1294.8	1296.2	1296.2	1294.8	1293.5	1292.1	1290.8
162.5°	1305.6	1307.0	1308.3	1308.3	1306.7	1305.2	1303.7	1302.1
165°	1322.8	1324.6	1326.4	1326.2	1324.2	1322.2	1320.2	1318.1
167.5°	1335.3	1337.3	1339.2	1339.1	1336.9	1334.6	1332.4	1330.1
170°	1343.0	1344.8	1346.6	1346.4	1344.1	1341.9	1339.6	1337.4
172.5°	1347.9	1349.7	1351.5	1351.2	1348.7	1346.3	1343.9	1341.4
175°	1353.6	1355.6	1357.7	1357.3	1354.6	1351.9	1349.2	1346.5
177.5°	1355.9	1357.3	1358.8	1358.4	1356.2	1354.1	1351.9	1349.8
180°	1354.6	1354.6	1354.6	1354.6	1354.6	1354.6	1354.6	1354.6

(END OF REPORT)