

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: P331977

Luminaire Tested: **S123DIP-S775D805U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331977
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S775D805U835-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 805 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5990.6 lumens
Efficiency: N/A
Efficacy: 130.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: General Diffuse

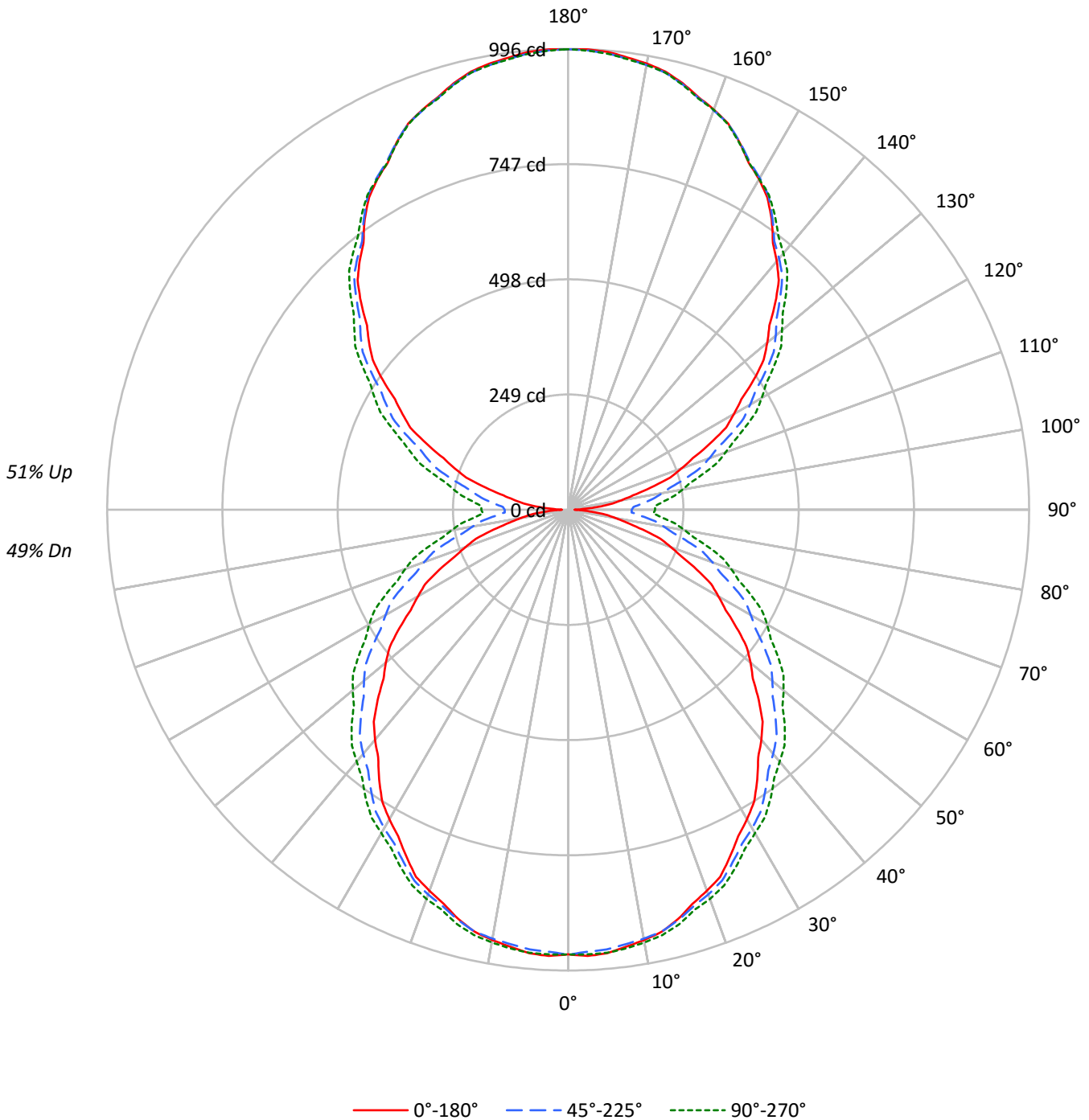
Input Watts (W): 45.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331977

CATALOG NUMBER: S123DIP-S775D805U835-4F0-1E-UDD-D1

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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	49
1	97	92	88	84	89	85	81	78	71	68	66	59	57	55	47	46	45	39
2	88	80	73	67	80	73	68	63	62	58	54	51	48	45	41	39	37	32
3	80	70	62	56	73	64	57	52	54	49	45	45	41	38	36	33	31	27
4	73	61	53	47	67	57	49	44	48	42	38	40	36	32	32	29	26	23
5	67	55	46	40	61	50	43	37	43	37	32	36	31	28	29	26	23	20
6	61	49	40	34	56	45	38	32	38	33	28	32	28	24	26	23	20	17
7	57	44	36	30	52	41	33	28	35	29	25	29	25	21	24	20	18	15
8	52	40	32	27	48	37	30	25	32	26	22	27	22	19	22	18	16	13
9	49	36	29	24	45	34	27	22	29	23	20	24	20	17	20	17	14	12
10	46	33	26	21	42	31	24	20	27	21	18	23	18	15	19	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10346	10346	10346
5°	10379	10086	10092
10°	10286	9853	9804
15°	10153	9590	9490
20°	9963	9288	9146
25°	9730	8942	8782
30°	9490	8630	8415
35°	9221	8300	8121
40°	8965	8000	7807
45°	8682	7712	7556
50°	8400	7427	7278
55°	8091	7135	7030
60°	7790	6839	6774
65°	7480	6524	6470
70°	7013	6169	6159
75°	6425	5763	5842
80°	5749	5363	5479
85°	5117	5090	5269



TEST NUMBER: P331977

CATALOG NUMBER: S123DIP-S775D805U835-4F0-1E-UDD-D1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.1	1.5
10°-20°	259.8	4.3
20°-30°	388.5	6.5
30°-40°	464.0	7.7
40°-50°	485.4	8.1
50°-60°	455.5	7.6
60°-70°	380.5	6.4
70°-80°	272.2	4.5
80°-90°	165.3	2.8
90°-100°	166.7	2.8
100°-110°	268.9	4.5
110°-120°	380.1	6.3
120°-130°	462.7	7.7
130°-140°	500.8	8.4
140°-150°	482.4	8.1
150°-160°	403.8	6.7
160°-170°	268.8	4.5
170°-180°	94.1	1.6
0°-30°	739.4	12.3
0°-40°	1203.3	20.1
0°-60°	2144.3	35.8
0°-90°	2962.2	49.4
90°-120°	815.7	13.6
90°-150°	2261.6	37.8
90°-180°	3028.0	50.5
0°-180°	5990.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	961	961	961	961	961	
5°	962	960	954	962	961	91
15°	916	919	918	928	928	258
25°	827	837	841	854	854	381
35°	712	729	742	757	762	445
45°	582	607	634	653	662	449
55°	444	479	516	543	553	397
65°	307	348	394	424	436	303
75°	166	216	268	301	315	178
85°	51	104	159	193	205	54
90°	14	74	137	174	188	12
95°	58	105	162	196	208	61
105°	184	212	263	291	303	197
115°	338	354	389	413	422	334
125°	489	493	521	539	544	437
135°	633	637	647	662	667	488
145°	766	767	769	777	778	478
155°	876	876	877	880	875	403
165°	955	952	952	956	952	269
175°	993	990	990	994	989	94
180°	995	995	995	995	995	



TEST NUMBER: P331977

CATALOG NUMBER: S123DIP-S775D805U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2
2.5°	965.4	964.8	964.3	963.7	963.2	962.1	960.7	959.2	957.7	956.2	957.7
5°	962.3	961.8	961.3	960.9	960.4	959.5	958.1	956.7	955.3	953.9	955.8
7.5°	952.8	952.9	953.0	953.1	953.2	952.6	951.2	949.9	948.5	947.2	949.5
10°	944.5	944.9	945.4	945.9	946.3	946.0	944.8	943.7	942.5	941.3	943.7
12.5°	934.4	935.1	935.7	936.4	937.0	937.0	936.2	935.4	934.6	933.8	935.9
15°	916.2	916.9	917.6	918.3	919.0	919.2	919.0	918.8	918.5	918.3	920.6
17.5°	893.2	894.6	896.0	897.3	898.7	899.4	899.3	899.2	899.1	899.0	901.1
20°	876.4	877.8	879.2	880.6	882.0	882.9	883.4	883.9	884.3	884.8	886.9
22.5°	858.8	860.2	861.6	863.0	864.4	865.4	866.1	866.7	867.4	868.0	870.7
25°	827.2	829.5	831.8	834.2	836.5	838.0	838.7	839.4	840.1	840.8	843.8
27.5°	795.4	798.0	800.7	803.3	806.0	808.0	809.5	811.0	812.5	814.0	816.6
30°	772.7	775.8	778.8	781.8	784.8	787.3	789.1	791.0	792.9	794.7	797.5
32.5°	747.6	751.0	754.4	757.8	761.2	764.1	766.5	769.0	771.4	773.8	776.8
35°	712.0	715.7	719.5	723.2	726.9	730.3	733.3	736.3	739.4	742.4	745.9
37.5°	674.3	678.5	682.7	686.9	691.1	695.0	698.8	702.5	706.2	709.9	713.9
40°	649.2	653.4	657.6	661.8	665.9	670.4	675.0	679.7	684.3	689.0	692.9
42.5°	621.5	626.7	631.8	636.9	642.0	647.0	651.8	656.7	661.5	666.4	670.7
45°	582.2	587.8	593.3	598.9	604.5	610.2	616.0	621.8	627.7	633.5	637.9
47.5°	540.9	547.3	553.6	559.9	566.2	572.7	579.4	586.0	592.7	599.3	604.3
50°	514.1	520.6	527.1	533.7	540.2	547.0	554.3	561.5	568.7	575.9	581.2
52.5°	485.6	492.5	499.4	506.3	513.2	520.6	528.6	536.5	544.5	552.4	558.0
55°	444.0	451.6	459.3	467.0	474.7	482.7	491.1	499.5	507.8	516.2	522.5
57.5°	403.3	411.3	419.3	427.3	435.4	443.9	453.1	462.3	471.4	480.6	486.9
60°	374.9	383.2	391.6	400.0	408.4	417.3	426.9	436.4	445.9	455.5	462.0
62.5°	348.0	356.6	365.2	373.7	382.3	391.6	401.7	411.8	421.9	432.0	438.5
65°	306.8	315.9	324.9	334.0	343.1	352.7	363.0	373.2	383.5	393.7	400.7
67.5°	264.9	274.5	284.2	293.8	303.4	313.5	323.9	334.3	344.7	355.2	362.8
70°	235.6	245.6	255.6	265.6	275.6	286.2	297.4	308.5	319.7	330.9	338.3
72.5°	208.8	218.8	228.8	238.8	248.8	259.6	271.1	282.7	294.2	305.7	313.4
75°	166.5	177.4	188.4	199.3	210.2	221.5	233.1	244.8	256.4	268.1	275.7
77.5°	129.6	140.7	151.7	162.7	173.7	185.1	196.9	208.6	220.3	232.0	240.1
80°	103.7	115.1	126.5	137.9	149.3	161.0	173.1	185.2	197.3	209.4	217.3
82.5°	81.0	92.6	104.2	115.8	127.4	139.3	151.6	163.9	176.2	188.5	196.4
85°	51.3	62.9	74.6	86.2	97.8	109.8	122.2	134.5	146.8	159.2	167.1
87.5°	28.0	39.9	51.9	63.8	75.7	87.9	100.2	112.5	124.8	137.2	145.2
90°	14.4	27.5	40.7	53.8	66.9	80.6	94.7	108.8	123.0	137.1	145.7
92.5°	31.7	43.2	54.6	66.1	77.6	89.8	102.7	115.7	128.7	141.6	149.9
95°	57.6	67.9	78.2	88.5	98.8	110.4	123.1	135.9	148.7	161.5	169.4
97.5°	92.2	101.3	110.4	119.5	128.6	139.1	151.0	162.9	174.8	186.7	194.4
100°	115.8	124.2	132.7	141.2	149.7	159.7	171.3	182.9	194.5	206.0	213.3
102.5°	143.1	150.4	157.7	165.0	172.4	181.9	193.5	205.2	216.9	228.5	235.6
105°	184.3	190.2	196.2	202.1	208.0	216.8	228.3	239.9	251.5	263.0	269.6
107.5°	231.2	236.2	241.1	246.1	251.0	258.6	268.7	278.8	288.9	299.0	305.8
110°	260.4	264.9	269.5	274.0	278.5	285.6	295.3	304.9	314.6	324.2	331.0



TEST NUMBER: P331977

CATALOG NUMBER: S123DIP-S775D805U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	291.7	295.3	299.0	302.6	306.3	312.6	321.6	330.6	339.6	348.6	355.3
115°	337.5	340.8	344.1	347.5	350.8	356.4	364.5	372.5	380.5	388.6	394.3
117.5°	384.5	386.6	388.7	390.7	392.8	397.6	405.0	412.4	419.8	427.2	432.7
120°	413.1	415.3	417.5	419.7	421.9	426.4	433.2	440.0	446.9	453.7	458.8
122.5°	443.7	445.1	446.5	447.8	449.2	453.3	460.2	467.0	473.9	480.7	485.5
125°	489.4	490.0	490.5	491.0	491.5	495.0	501.4	507.8	514.2	520.6	524.8
127.5°	532.6	533.5	534.4	535.2	536.1	539.2	544.4	549.6	554.8	560.0	563.6
130°	561.4	562.5	563.7	564.8	566.0	568.7	572.8	576.9	581.0	585.2	588.9
132.5°	589.3	590.7	592.0	593.3	594.7	597.0	600.4	603.7	607.0	610.4	613.8
135°	633.0	633.9	634.7	635.5	636.3	637.9	640.3	642.6	645.0	647.4	650.9
137.5°	673.5	674.2	674.9	675.5	676.2	677.5	679.4	681.3	683.2	685.1	688.0
140°	700.8	701.7	702.5	703.4	704.3	705.1	706.0	706.9	707.8	708.6	711.9
142.5°	726.4	727.1	727.8	728.5	729.2	729.7	730.2	730.6	731.1	731.5	734.5
145°	766.5	766.6	766.7	766.8	766.9	767.2	767.8	768.3	768.8	769.3	771.0
147.5°	800.5	801.1	801.7	802.3	803.0	803.5	804.0	804.5	805.0	805.5	806.0
150°	824.8	825.2	825.5	825.9	826.2	826.6	826.9	827.3	827.6	828.0	828.0
152.5°	844.9	845.3	845.8	846.3	846.8	847.2	847.4	847.6	847.8	848.0	848.3
155°	876.4	876.4	876.4	876.4	876.4	876.5	876.7	876.9	877.1	877.2	877.9
157.5°	903.3	903.1	902.9	902.7	902.5	902.5	902.6	902.8	902.9	903.0	903.8
160°	920.2	919.9	919.5	919.2	918.8	918.7	918.7	918.7	918.7	918.7	919.5
162.5°	935.2	934.8	934.3	933.8	933.3	933.1	933.3	933.4	933.5	933.7	934.5
165°	954.6	954.1	953.6	953.1	952.5	952.3	952.3	952.3	952.3	952.3	953.3
167.5°	970.1	969.4	968.7	968.0	967.3	967.1	967.2	967.3	967.5	967.6	968.7
170°	978.9	978.2	977.5	976.8	976.1	975.7	975.7	975.7	975.7	975.7	977.0
172.5°	985.7	985.1	984.4	983.7	983.0	982.6	982.6	982.6	982.6	982.6	983.7
175°	992.9	992.2	991.6	990.9	990.2	989.8	989.8	989.8	989.8	989.8	990.9
177.5°	995.9	995.4	994.8	994.2	993.7	993.4	993.4	993.4	993.4	993.4	994.2
180°	995.3	995.3	995.3	995.3	995.3	995.3	995.3	995.3	995.3	995.3	995.3



TEST NUMBER: P331977

CATALOG NUMBER: S123DIP-S775D805U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2
2.5°	959.2	960.7	962.1	962.8	962.6	962.4	962.2	962.1
5°	957.6	959.5	961.3	962.1	961.9	961.7	961.5	961.2
7.5°	951.8	954.2	956.5	957.5	957.2	957.0	956.7	956.4
10°	946.0	948.3	950.6	951.6	951.1	950.6	950.2	949.7
12.5°	938.1	940.2	942.3	943.2	942.7	942.3	941.8	941.3
15°	922.9	925.3	927.6	928.6	928.4	928.2	927.9	927.7
17.5°	903.2	905.3	907.4	908.3	908.0	907.6	907.3	907.0
20°	889.0	891.1	893.2	894.3	894.6	894.8	895.0	895.3
22.5°	873.3	876.0	878.6	879.9	879.8	879.6	879.5	879.3
25°	846.9	849.9	852.9	854.4	854.4	854.4	854.4	854.4
27.5°	819.2	821.8	824.4	825.8	826.0	826.2	826.4	826.6
30°	800.3	803.1	805.9	807.3	807.3	807.3	807.3	807.3
32.5°	779.7	782.7	785.7	787.5	788.0	788.6	789.1	789.7
35°	749.4	752.9	756.3	758.6	759.5	760.4	761.3	762.3
37.5°	717.8	721.8	725.7	728.1	728.8	729.6	730.3	731.1
40°	696.9	700.8	704.8	707.2	708.2	709.1	710.0	711.0
42.5°	675.0	679.3	683.7	686.5	687.8	689.1	690.4	691.7
45°	642.3	646.7	651.2	654.3	656.2	658.0	659.9	661.8
47.5°	609.3	614.3	619.3	622.5	623.9	625.4	626.8	628.2
50°	586.6	591.9	597.3	600.8	602.4	604.0	605.7	607.3
52.5°	563.5	569.1	574.6	578.4	580.4	582.4	584.4	586.4
55°	528.8	535.1	541.3	545.4	547.3	549.1	551.0	552.9
57.5°	493.3	499.6	505.9	510.2	512.4	514.6	516.7	518.9
60°	468.5	475.0	481.5	486.1	488.6	491.2	493.8	496.3
62.5°	445.1	451.6	458.1	462.5	464.9	467.3	469.7	472.0
65°	407.7	414.6	421.6	426.3	428.6	430.9	433.3	435.6
67.5°	370.4	378.1	385.7	390.5	392.4	394.4	396.4	398.3
70°	345.8	353.2	360.7	365.5	367.9	370.2	372.5	374.9
72.5°	321.0	328.6	336.3	341.3	343.6	345.9	348.2	350.6
75°	283.4	291.1	298.8	304.0	306.8	309.6	312.4	315.2
77.5°	248.2	256.3	264.4	269.5	271.7	273.8	276.0	278.1
80°	225.2	233.1	241.1	246.2	248.5	250.8	253.2	255.5
82.5°	204.3	212.2	220.1	225.2	227.6	229.9	232.2	234.5
85°	175.0	182.9	190.8	195.9	198.2	200.6	202.9	205.2
87.5°	153.3	161.3	169.4	174.6	177.0	179.4	181.8	184.2
90°	154.3	162.9	171.5	177.1	179.8	182.5	185.2	187.8
92.5°	158.2	166.5	174.8	179.9	181.8	183.7	185.7	187.6
95°	177.3	185.2	193.1	198.3	200.6	202.9	205.2	207.6
97.5°	202.1	209.9	217.6	222.6	224.8	227.1	229.4	231.6
100°	220.6	227.8	235.1	240.1	242.7	245.4	248.1	250.8
102.5°	242.7	249.8	256.9	261.5	263.8	266.0	268.3	270.6
105°	276.1	282.6	289.1	293.6	296.0	298.5	300.9	303.4
107.5°	312.6	319.4	326.2	330.5	332.4	334.2	336.0	337.9
110°	337.7	344.5	351.2	355.3	356.9	358.4	359.9	361.4



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CATALOG NUMBER: S123DIP-S775D805U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	362.0	368.7	375.4	379.7	381.7	383.7	385.7	387.7
115°	400.1	405.8	411.6	415.3	417.0	418.7	420.4	422.1
117.5°	438.2	443.7	449.2	452.6	454.0	455.3	456.6	457.9
120°	464.0	469.2	474.4	477.6	478.9	480.2	481.4	482.7
122.5°	490.2	494.9	499.6	502.5	503.7	504.8	506.0	507.1
125°	529.0	533.2	537.4	539.9	540.9	541.8	542.7	543.7
127.5°	567.2	570.9	574.5	576.7	577.5	578.3	579.1	579.8
130°	592.6	596.4	600.1	602.0	602.2	602.4	602.6	602.8
132.5°	617.2	620.6	624.0	626.0	626.7	627.3	627.9	628.6
135°	654.4	657.9	661.4	663.5	664.4	665.2	666.0	666.8
137.5°	691.0	693.9	696.9	698.6	699.1	699.6	700.1	700.6
140°	715.3	718.6	721.9	723.5	723.5	723.4	723.4	723.3
142.5°	737.4	740.4	743.3	744.9	745.1	745.4	745.6	745.8
145°	772.7	774.4	776.1	777.0	777.3	777.5	777.8	778.0
147.5°	806.6	807.1	807.7	807.9	807.7	807.5	807.3	807.0
150°	828.0	828.0	828.0	827.7	827.1	826.5	826.0	825.4
152.5°	848.5	848.8	849.1	848.8	848.0	847.2	846.4	845.6
155°	878.6	879.3	880.0	879.7	878.5	877.3	876.1	874.9
157.5°	904.5	905.2	905.9	905.8	904.9	903.9	902.9	901.9
160°	920.4	921.3	922.1	922.2	921.5	920.8	920.1	919.4
162.5°	935.4	936.3	937.2	937.0	935.9	934.8	933.7	932.6
165°	954.4	955.4	956.5	956.4	955.2	953.9	952.7	951.5
167.5°	969.8	970.8	971.9	971.9	970.8	969.8	968.7	967.6
170°	978.2	979.4	980.6	980.6	979.4	978.2	977.0	975.7
172.5°	984.8	985.9	986.9	986.9	985.6	984.4	983.2	982.0
175°	991.9	992.9	994.0	993.9	992.7	991.5	990.2	989.0
177.5°	995.1	995.9	996.7	996.7	995.7	994.7	993.8	992.8
180°	995.3	995.3	995.3	995.3	995.3	995.3	995.3	995.3

(END OF REPORT)