

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: P332158

Luminaire Tested: **S123DIW-S775D755U835-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332158
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIW-S775D755U835-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 755 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6253.3 lumens
Efficiency: N/A
Efficacy: 139.0 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

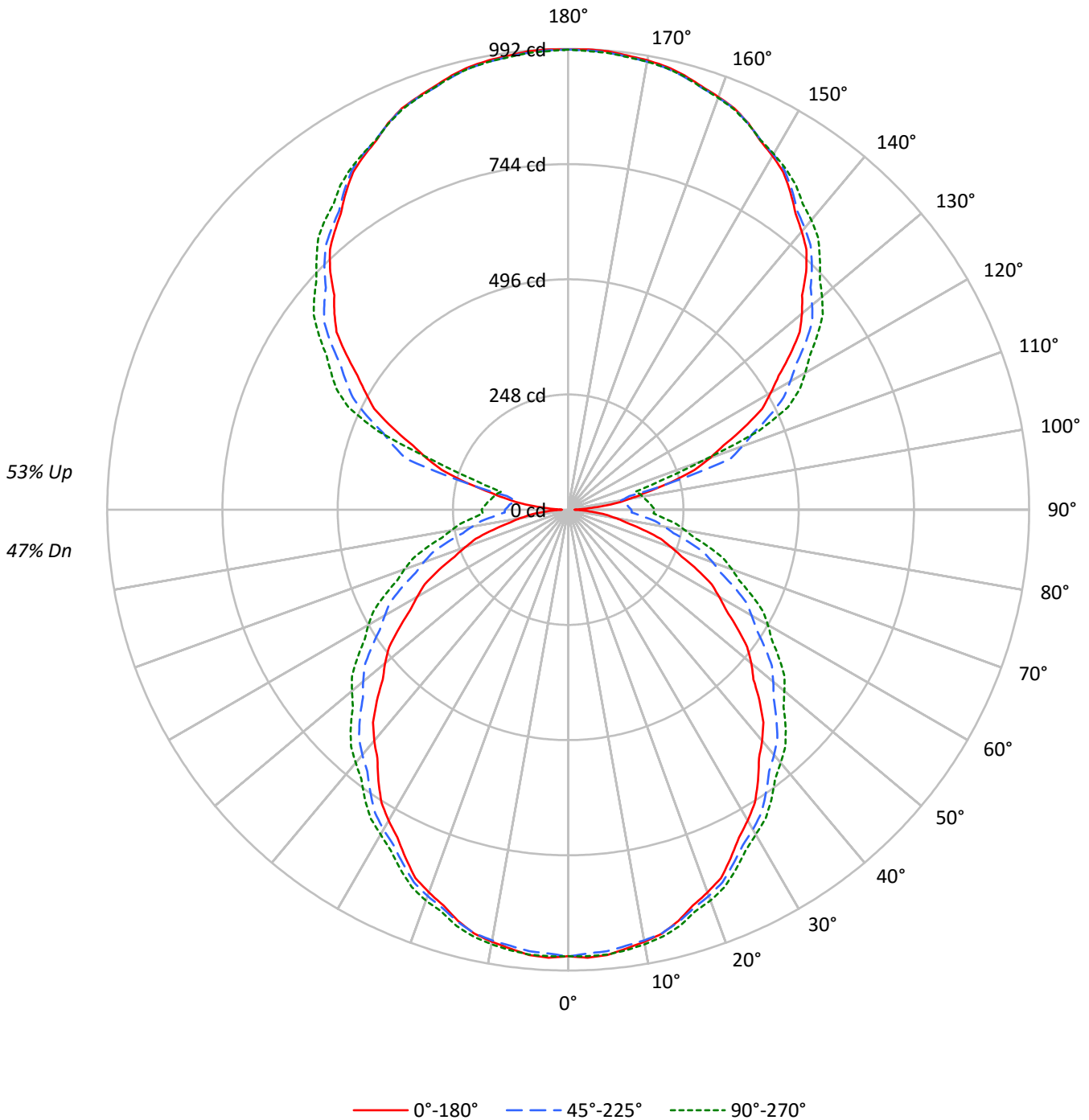
Input Watts (W): 45
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	107	107	107	98	98	98	98	82	82	82	67	67	67	54	54	54	47
1	96	91	87	83	88	84	80	77	70	68	65	58	56	54	46	45	43	38
2	87	79	73	67	80	73	67	62	61	57	53	50	47	44	40	38	36	31
3	79	69	62	56	72	64	57	52	53	48	44	44	40	37	35	32	30	26
4	72	61	53	47	66	56	49	44	47	42	37	39	35	31	31	28	26	22
5	66	54	46	40	61	50	43	37	42	36	32	35	30	27	28	25	22	19
6	61	49	40	34	56	45	38	32	38	32	28	31	27	24	25	22	19	16
7	56	44	36	30	52	41	33	28	34	29	24	28	24	21	23	20	17	14
8	52	40	32	26	48	37	30	25	31	26	22	26	22	18	21	18	15	13
9	49	36	29	23	45	34	27	22	29	23	19	24	20	16	19	16	14	12
10	45	33	26	21	42	31	24	20	26	21	17	22	18	15	18	15	12	10

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



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.1	1.5
10°-20°	259.8	4.2
20°-30°	388.5	6.2
30°-40°	464.0	7.4
40°-50°	485.4	7.8
50°-60°	455.5	7.3
60°-70°	380.5	6.1
70°-80°	272.2	4.4
80°-90°	165.1	2.6
90°-100°	137.9	2.2
100°-110°	246.5	3.9
110°-120°	462.2	7.4
120°-130°	553.5	8.9
130°-140°	573.7	9.2
140°-150°	527.2	8.4
150°-160°	423.1	6.8
160°-170°	273.1	4.4
170°-180°	94.1	1.5
0°-30°	739.4	11.8
0°-40°	1203.3	19.2
0°-60°	2144.3	34.3
0°-90°	2962.0	47.4
90°-120°	846.6	13.5
90°-150°	2501.0	40.0
90°-180°	3291.0	52.6
0°-180°	6253.3	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	73	136	173	186	11
95°	56	70	126	163	175	64
105°	228	258	240	145	150	241
115°	417	435	478	509	522	411
125°	583	590	622	645	654	521
135°	724	728	742	762	766	557
145°	834	838	840	849	854	522
155°	918	916	917	920	916	423
165°	968	966	965	970	965	273
175°	990	987	988	992	987	94
180°	990	990	990	990	990	



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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	51.8	63.7	75.7	87.8	100.1	112.3	124.6	136.9	145.0
90°	14.3	27.4	40.4	53.5	66.5	80.0	94.0	108.0	122.0	136.0	144.5
92.5°	26.5	36.3	46.1	55.9	65.8	77.3	90.6	103.9	117.2	130.5	139.2
95°	56.4	58.8	61.1	63.5	65.9	73.7	86.9	100.1	113.3	126.5	134.8
97.5°	100.5	105.7	110.8	116.0	121.2	123.4	122.5	121.6	120.7	119.8	128.1
100°	133.8	144.5	155.2	165.9	176.6	174.6	159.8	145.0	130.2	115.4	123.4
102.5°	171.8	180.9	189.9	199.0	208.0	203.9	186.5	169.2	151.8	134.5	137.0
105°	227.7	235.0	242.4	249.8	257.2	258.5	253.8	249.1	244.4	239.7	217.3
107.5°	285.6	291.8	297.9	304.1	310.3	319.3	331.1	342.9	354.8	366.6	351.6
110°	324.2	329.7	335.2	340.7	346.2	354.5	365.6	376.7	387.8	398.9	399.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	361.9	366.5	371.1	375.7	380.3	388.0	398.7	409.5	420.2	430.9	436.9
115°	416.6	420.4	424.1	427.9	431.7	438.5	448.3	458.2	468.0	477.9	485.1
117.5°	470.4	473.3	476.2	479.2	482.1	487.9	496.5	505.1	513.7	522.4	529.2
120°	503.1	505.7	508.4	511.0	513.6	519.0	527.2	535.4	543.6	551.7	558.4
122.5°	537.2	539.1	540.9	542.7	544.5	549.4	557.3	565.2	573.2	581.1	587.2
125°	583.0	584.3	585.6	586.9	588.2	592.6	600.0	607.4	614.8	622.2	627.4
127.5°	628.3	629.4	630.5	631.6	632.6	636.4	642.7	649.1	655.5	661.8	667.0
130°	656.6	657.7	658.7	659.8	660.9	664.1	669.4	674.7	680.0	685.3	690.4
132.5°	682.8	684.1	685.4	686.6	687.9	690.6	694.9	699.1	703.4	707.6	712.5
135°	724.0	724.7	725.5	726.2	727.0	728.9	732.2	735.4	738.6	741.8	746.5
137.5°	759.1	760.1	761.2	762.3	763.3	764.7	766.5	768.3	770.1	772.0	776.4
140°	781.8	782.8	783.8	784.7	785.7	786.8	788.0	789.2	790.4	791.6	795.7
142.5°	803.6	804.4	805.2	806.0	806.8	807.5	808.1	808.7	809.4	810.0	813.6
145°	834.0	835.0	835.9	836.8	837.7	838.3	838.6	839.0	839.3	839.6	841.8
147.5°	861.7	862.4	863.2	863.9	864.7	865.2	865.6	865.9	866.2	866.5	867.4
150°	879.4	879.8	880.3	880.8	881.3	881.7	882.1	882.4	882.7	883.0	883.4
152.5°	895.2	895.5	895.7	895.9	896.2	896.4	896.6	896.8	897.0	897.2	897.7
155°	917.6	917.3	917.0	916.6	916.3	916.2	916.4	916.6	916.7	916.9	917.7
157.5°	935.0	935.0	934.9	934.9	934.9	934.8	934.6	934.4	934.3	934.1	935.1
160°	945.6	945.4	945.3	945.1	944.9	944.8	944.6	944.4	944.3	944.1	945.1
162.5°	955.6	955.2	954.7	954.3	953.9	953.6	953.4	953.3	953.1	952.9	954.1
165°	967.7	967.2	966.7	966.2	965.7	965.4	965.2	965.0	964.9	964.7	966.0
167.5°	977.1	976.4	975.8	975.1	974.5	974.1	974.1	974.1	974.1	974.1	975.4
170°	982.4	981.7	981.1	980.4	979.8	979.4	979.4	979.4	979.4	979.4	980.7
172.5°	985.9	985.1	984.3	983.6	982.8	982.4	982.6	982.7	982.8	983.0	984.3
175°	990.5	989.6	988.8	988.0	987.2	986.9	987.0	987.2	987.4	987.5	988.7
177.5°	991.6	991.0	990.3	989.7	989.0	988.8	988.9	989.0	989.2	989.3	990.3
180°	990.5	990.5	990.5	990.5	990.5	990.5	990.5	990.5	990.5	990.5	990.5



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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°	153.0	161.1	169.1	174.3	176.7	179.1	181.5	183.9
90°	153.1	161.7	170.2	175.9	178.5	181.2	183.8	186.5
92.5°	148.0	156.8	165.5	171.1	173.4	175.8	178.1	180.4
95°	143.2	151.5	159.9	165.2	167.6	169.9	172.2	174.6
97.5°	136.3	144.5	152.8	158.2	160.6	163.1	165.6	168.1
100°	131.5	139.5	147.6	152.9	155.4	157.9	160.3	162.8
102.5°	139.5	142.0	144.5	147.1	149.7	152.3	154.9	157.6
105°	194.8	172.4	150.0	140.0	142.4	144.8	147.2	149.7
107.5°	336.6	321.6	306.6	289.2	269.5	249.7	229.9	210.2
110°	400.2	400.8	401.5	391.1	369.5	348.0	326.5	305.0



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CATALOG NUMBER: S123DIW-S775D755U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	442.9	448.8	454.8	456.3	453.4	450.5	447.7	444.8
115°	492.3	499.5	506.8	511.6	514.1	516.7	519.2	521.7
117.5°	536.0	542.9	549.7	554.1	556.1	558.0	560.0	561.9
120°	565.0	571.7	578.4	582.5	584.1	585.8	587.4	589.0
122.5°	593.3	599.3	605.4	609.3	611.1	612.9	614.6	616.4
125°	632.6	637.8	643.0	646.6	648.6	650.5	652.5	654.5
127.5°	672.1	677.2	682.4	685.5	686.8	688.1	689.3	690.6
130°	695.5	700.5	705.6	708.7	709.8	710.8	711.9	713.0
132.5°	717.4	722.3	727.2	730.2	731.3	732.4	733.5	734.7
135°	751.2	755.8	760.5	763.2	763.9	764.5	765.2	765.9
137.5°	780.9	785.3	789.8	792.4	793.3	794.1	795.0	795.8
140°	799.8	804.0	808.1	810.6	811.5	812.3	813.1	814.0
142.5°	817.3	820.9	824.6	826.7	827.4	828.1	828.8	829.5
145°	844.0	846.2	848.4	849.9	850.9	851.8	852.7	853.7
147.5°	868.3	869.2	870.1	870.6	870.7	870.7	870.8	870.9
150°	883.7	884.0	884.3	884.5	884.5	884.4	884.4	884.4
152.5°	898.3	898.9	899.5	899.5	898.8	898.2	897.5	896.8
155°	918.5	919.3	920.2	920.1	919.1	918.1	917.1	916.1
157.5°	936.1	937.0	938.0	937.9	936.6	935.3	934.1	932.8
160°	946.1	947.1	948.0	948.0	946.8	945.7	944.5	943.4
162.5°	955.2	956.3	957.4	957.4	956.4	955.4	954.4	953.4
165°	967.3	968.6	969.9	970.0	968.9	967.7	966.6	965.4
167.5°	976.7	978.1	979.4	979.4	978.1	976.7	975.4	974.1
170°	982.0	983.4	984.7	984.7	983.4	982.0	980.7	979.4
172.5°	985.6	986.9	988.2	988.1	986.7	985.3	983.8	982.4
175°	989.8	991.0	992.1	992.0	990.7	989.4	988.1	986.8
177.5°	991.4	992.4	993.5	993.3	992.0	990.7	989.4	988.1
180°	990.5	990.5	990.5	990.5	990.5	990.5	990.5	990.5

(END OF REPORT)