

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: P331692-935

Luminaire Tested: **SA2XXRDIP-C675D725U935-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

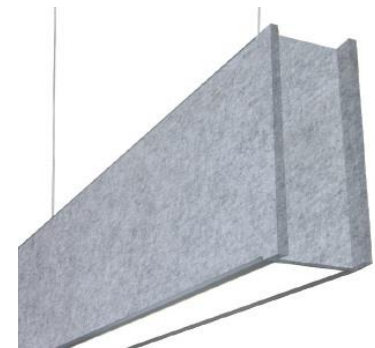
Test Information

Test Method: LM-79-08
Report Number: P331692-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXRDIP-C675D725U935-4F0-1E-UDD-F4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 725 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

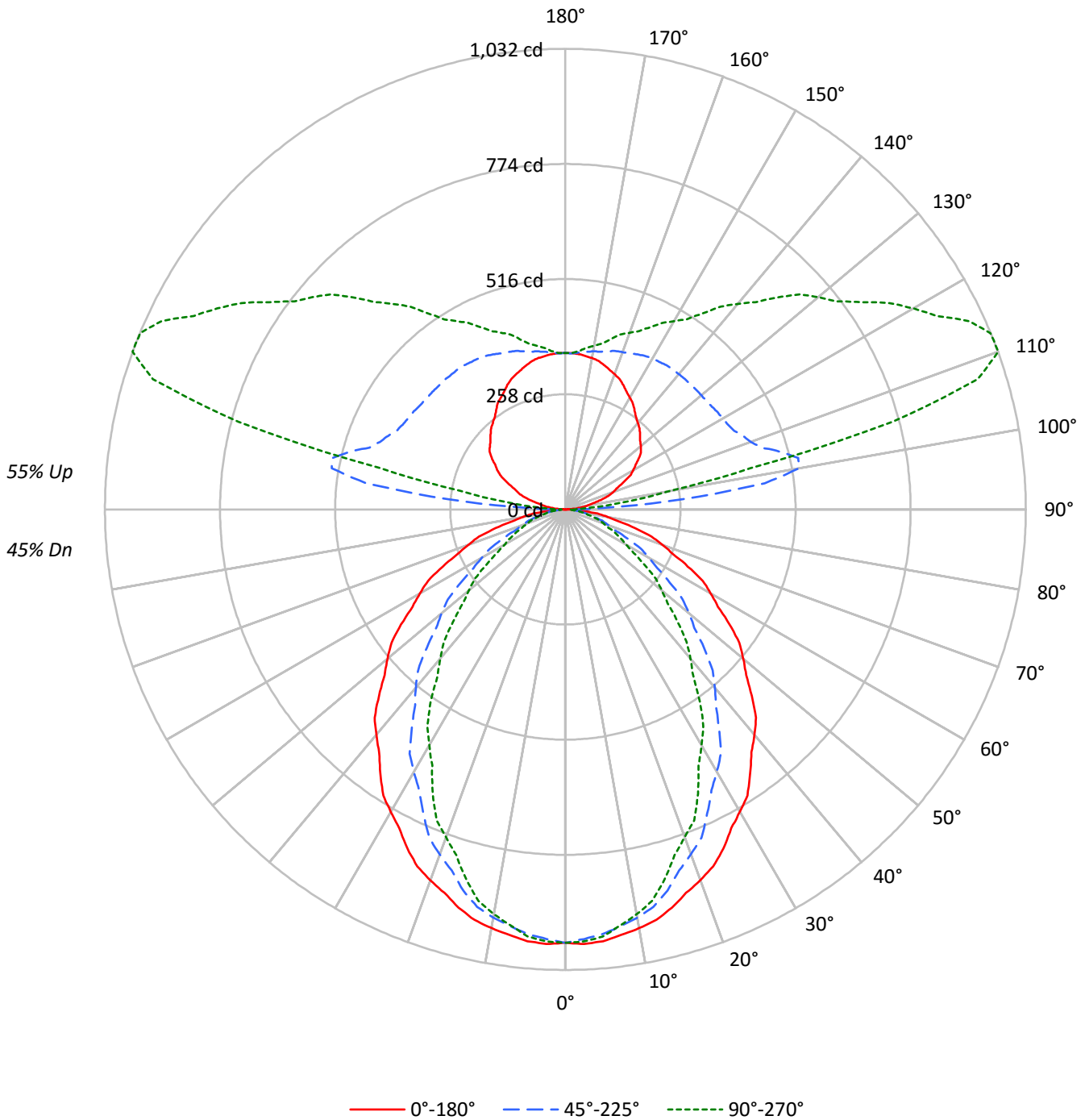
Lumens per Lamp: N/A
Luminaire Lumens: 4436.2 lumens
Efficiency: N/A
Efficacy: 96.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

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



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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	50	30	10	0	
RCR																						
0	106	106	106	106	97	97	97	97	81	81	81	66	66	66	52	52	52	45				
1	97	93	89	86	89	85	82	79	71	69	67	58	57	55	46	45	44	39				
2	89	82	76	71	81	75	70	66	63	59	56	52	49	47	41	40	38	33				
3	81	72	65	60	74	67	60	56	56	51	48	46	43	40	37	35	33	29				
4	75	64	57	51	68	59	53	47	50	45	41	41	38	35	33	31	29	25				
5	69	57	49	44	63	53	46	41	45	40	36	37	33	30	30	27	25	22				
6	63	52	44	38	58	48	41	36	41	35	31	34	30	27	28	25	22	20				
7	59	47	39	34	54	43	36	32	37	32	28	31	27	24	25	22	20	17				
8	54	42	35	30	50	39	33	28	34	28	25	28	24	21	23	20	18	16				
9	51	39	32	27	47	36	30	25	31	26	22	26	22	19	22	19	16	14				
10	47	36	29	24	44	33	27	23	29	24	20	24	20	18	20	17	15	13				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15681	15681	15681
5°	15741	15486	15571
10°	15621	15231	15101
15°	15442	14780	14355
20°	15192	14136	13426
25°	14938	13402	12527
30°	14585	12652	11373
35°	14241	11832	10360
40°	13894	10985	9187
45°	13486	10035	8127
50°	13069	9075	7086
55°	12645	8042	6086
60°	12148	6952	5050
65°	11584	5841	4604
70°	10914	4810	4230
75°	10087	4386	3949
80°	8908	3924	3598
85°	7003	3094	3094



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.9	2.0
10°-20°	249.6	5.6
20°-30°	350.5	7.9
30°-40°	382.2	8.6
40°-50°	351.5	7.9
50°-60°	276.0	6.2
60°-70°	180.0	4.1
70°-80°	92.8	2.1
80°-90°	27.2	0.6
90°-100°	139.9	3.2
100°-110°	474.9	10.7
110°-120°	504.5	11.4
120°-130°	415.3	9.4
130°-140°	333.5	7.5
140°-150°	252.0	5.7
150°-160°	177.1	4.0
160°-170°	104.3	2.4
170°-180°	33.9	0.8
0°-30°	691.1	15.6
0°-40°	1073.3	24.2
0°-60°	1700.8	38.3
0°-90°	2000.8	45.1
90°-120°	1119.3	25.2
90°-150°	2120.1	47.8
90°-180°	2435.0	54.9
0°-180°	4436.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	971	971	971	971	971	
5°	971	966	956	963	961	92
15°	924	913	884	868	859	260
25°	838	809	752	718	703	385
35°	722	676	600	547	526	452
45°	591	530	440	379	356	456
55°	449	379	286	235	216	401
65°	303	232	153	125	120	300
75°	162	102	70	64	63	171
85°	38	20	17	17	17	45
90°	1	9	23	22	22	3
95°	24	58	264	100	77	25
105°	82	124	499	892	758	87
115°	145	183	417	861	998	143
125°	202	239	401	698	810	179
135°	237	283	396	586	671	183
145°	270	311	394	490	536	170
155°	308	332	383	433	450	141
165°	335	345	367	389	395	94
175°	349	350	353	357	356	33
180°	350	350	350	350	350	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2
2.5°	974.7	974.0	973.2	972.4	971.6	970.3	968.6	966.9	965.3	963.5	965.1
5°	971.2	970.3	969.3	968.3	967.3	965.6	963.0	960.5	957.9	955.5	957.2
7.5°	961.2	960.0	958.8	957.6	956.4	954.2	951.3	948.4	945.4	942.5	942.9
10°	952.8	951.4	950.0	948.6	947.3	944.7	940.7	936.9	933.0	929.0	928.5
12.5°	942.2	940.6	938.8	937.2	935.5	932.2	927.2	922.2	917.1	912.1	911.1
15°	923.8	921.6	919.5	917.3	915.2	910.8	904.1	897.5	890.9	884.2	880.5
17.5°	901.1	897.9	894.6	891.2	887.9	882.1	873.6	865.0	856.5	848.0	843.6
20°	884.2	880.3	876.4	872.5	868.6	861.8	852.0	842.2	832.5	822.7	817.8
22.5°	865.9	861.6	857.2	852.8	848.4	840.8	829.7	818.7	807.7	796.7	790.4
25°	838.5	832.2	826.0	819.8	813.6	803.9	791.1	778.2	765.3	752.3	744.3
27.5°	805.5	798.7	791.9	785.1	778.3	767.6	753.1	738.6	724.0	709.5	700.2
30°	782.3	774.8	767.4	760.0	752.6	741.1	725.4	709.8	694.1	678.6	668.6
32.5°	759.7	751.1	742.4	733.7	725.0	712.7	696.8	680.9	665.0	649.0	637.7
35°	722.5	712.6	702.6	692.6	682.7	669.1	651.9	634.7	617.5	600.3	588.0
37.5°	685.3	674.2	663.3	652.4	641.4	626.8	608.6	590.2	571.9	553.5	540.0
40°	659.2	647.5	635.8	624.1	612.3	597.0	578.1	559.1	540.2	521.2	507.4
42.5°	632.5	620.2	607.8	595.5	583.2	567.1	547.6	528.1	508.4	488.9	474.5
45°	590.6	577.6	564.5	551.4	538.3	521.5	501.0	480.5	459.9	439.5	425.6
47.5°	549.8	536.0	522.1	508.2	494.4	476.9	455.7	434.5	413.4	392.2	378.4
50°	520.3	506.4	492.6	478.7	464.9	447.2	425.7	404.2	382.7	361.3	347.8
52.5°	491.5	477.0	462.5	448.1	433.5	415.8	394.8	373.8	352.8	331.7	318.7
55°	449.2	433.9	418.7	403.5	388.2	370.1	349.0	327.9	306.8	285.7	274.0
57.5°	405.7	390.1	374.4	358.9	343.2	325.3	305.0	284.7	264.4	244.2	233.4
60°	376.2	360.6	344.9	329.3	313.7	295.8	275.7	255.5	235.5	215.3	205.3
62.5°	347.3	331.7	316.1	300.5	284.8	267.4	248.3	229.1	209.9	190.7	181.2
65°	303.2	287.4	271.6	255.8	240.0	223.3	205.7	188.1	170.5	152.9	146.3
67.5°	260.7	245.0	229.3	213.6	197.9	182.1	166.3	150.5	134.7	118.8	115.8
70°	231.2	215.9	200.7	185.5	170.2	155.8	142.4	128.9	115.5	101.9	100.0
72.5°	203.0	188.4	173.8	159.2	144.6	131.9	121.1	110.2	99.4	88.6	87.0
75°	161.7	148.1	134.4	120.7	107.0	96.9	90.2	83.6	77.0	70.3	69.0
77.5°	121.1	109.1	97.1	85.2	73.2	65.5	62.3	59.2	56.0	52.8	51.9
80°	95.8	85.8	75.9	66.0	56.0	50.0	48.0	46.1	44.2	42.2	41.4
82.5°	72.6	64.8	57.1	49.2	41.5	36.9	35.6	34.3	33.0	31.7	31.2
85°	37.8	33.7	29.6	25.5	21.4	19.0	18.4	17.9	17.3	16.7	16.7
87.5°	11.4	10.5	9.8	8.9	7.8	7.7	8.4	9.3	10.1	10.2	9.9
90°	0.7	2.7	5.4	6.7	8.1	10.1	13.4	18.2	22.2	22.9	22.2
92.5°	8.2	11.9	16.7	19.6	24.2	30.6	45.8	67.2	86.3	87.5	73.9
95°	23.6	26.3	33.0	39.0	49.8	66.0	96.9	155.5	233.6	263.8	230.8
97.5°	38.4	42.0	49.2	58.3	70.7	88.9	127.9	209.5	339.2	450.4	472.5
100°	51.8	53.8	59.9	70.7	84.1	103.0	138.6	220.8	366.1	531.7	628.6
102.5°	64.2	65.7	71.7	82.5	96.5	115.4	148.4	221.3	355.9	534.4	686.7
105°	82.1	84.8	89.5	99.6	114.4	133.3	164.9	224.8	335.9	498.7	677.8
107.5°	101.5	103.7	108.2	117.5	132.2	151.2	181.8	234.1	325.9	460.5	618.6
110°	114.4	117.1	121.1	129.9	144.0	163.6	193.1	241.6	323.7	442.2	581.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	126.2	129.0	133.5	141.7	155.3	175.4	204.0	249.7	324.3	430.3	555.7
115°	144.7	148.1	152.1	160.1	173.7	191.8	220.8	261.8	327.1	417.3	523.7
117.5°	163.8	166.5	170.6	177.7	190.6	209.5	236.3	274.7	331.9	411.0	503.4
120°	175.6	178.4	182.4	188.5	201.9	220.8	247.0	283.4	335.2	407.2	492.7
122.5°	187.0	189.2	193.1	199.8	213.2	232.6	257.3	290.9	339.0	405.0	483.5
125°	201.9	204.0	207.9	216.0	229.5	248.3	272.6	302.9	344.6	401.1	470.5
127.5°	213.8	216.5	222.1	231.0	243.9	263.3	286.9	314.0	350.4	398.8	458.3
130°	220.8	223.4	230.1	239.6	253.0	271.9	295.5	321.1	354.7	397.8	450.3
132.5°	227.2	230.5	237.7	247.7	261.7	280.5	303.0	328.0	359.0	397.3	443.8
135°	236.9	239.6	247.7	257.8	273.3	292.1	313.7	337.2	364.1	396.4	434.8
137.5°	246.1	249.3	257.4	268.1	283.5	301.0	322.3	344.2	368.7	396.3	428.4
140°	253.0	255.7	263.8	274.6	289.4	306.9	327.1	347.9	370.8	395.7	424.7
142.5°	260.0	262.3	269.8	280.5	294.8	311.3	330.9	351.2	372.5	395.7	420.9
145°	270.5	273.3	280.0	290.1	303.5	318.3	336.6	355.3	374.2	394.4	415.9
147.5°	281.9	283.9	290.3	299.6	310.8	324.0	341.1	357.7	374.8	392.0	410.9
150°	289.4	291.4	296.8	305.6	315.6	327.8	343.3	358.7	374.2	390.4	406.5
152.5°	297.0	297.9	303.2	310.9	320.5	331.6	345.4	359.3	373.2	387.7	402.8
155°	307.5	308.2	312.3	319.7	327.1	337.2	348.6	360.1	371.5	383.0	395.7
157.5°	316.5	317.1	320.4	326.8	332.8	341.2	350.9	360.1	368.4	378.2	389.2
160°	322.4	323.0	325.7	331.1	336.6	343.9	352.0	360.1	366.8	374.9	384.4
162.5°	328.3	327.9	330.6	334.9	339.8	345.5	352.6	359.6	365.2	372.2	380.0
165°	335.2	334.5	335.9	339.9	343.3	347.3	353.4	358.1	362.1	366.8	372.9
167.5°	340.9	340.0	341.2	343.8	346.2	348.8	353.2	357.1	359.0	362.1	365.8
170°	344.6	343.3	343.9	345.9	347.3	349.3	352.7	356.0	357.4	359.4	362.1
172.5°	346.7	345.9	345.5	347.6	348.4	349.8	352.1	354.4	355.2	356.2	358.3
175°	349.3	348.6	347.9	349.3	349.3	350.0	351.3	352.7	352.0	352.7	353.4
177.5°	350.5	349.5	348.9	350.0	350.0	350.0	350.5	351.6	350.5	350.0	350.5
180°	350.0	350.0	350.0	350.0	350.0	350.0	350.0	350.0	350.0	350.0	350.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2
2.5°	966.6	968.2	969.7	970.3	970.1	969.7	969.5	969.1
5°	958.9	960.7	962.4	963.0	962.4	961.8	961.3	960.7
7.5°	943.4	943.9	944.4	944.2	943.1	942.2	941.2	940.1
10°	927.9	927.3	926.7	925.8	924.6	923.5	922.3	921.1
12.5°	910.1	909.0	907.9	906.5	904.5	902.6	900.6	898.6
15°	876.8	873.1	869.4	866.5	864.6	862.6	860.7	858.8
17.5°	839.2	834.7	830.3	826.5	823.1	819.8	816.4	813.0
20°	813.0	808.0	803.1	798.6	794.3	790.0	785.7	781.4
22.5°	784.1	777.8	771.5	766.8	763.5	760.3	757.2	754.0
25°	736.3	728.3	720.3	714.9	712.0	709.0	706.1	703.2
27.5°	690.8	681.5	672.2	665.1	660.5	655.8	651.2	646.5
30°	658.7	648.7	638.7	631.1	625.8	620.5	615.3	610.0
32.5°	626.3	614.9	603.6	595.4	590.4	585.5	580.5	575.6
35°	575.8	563.4	551.1	542.8	538.5	534.2	529.9	525.6
37.5°	526.4	512.9	499.4	490.1	485.2	480.3	475.4	470.5
40°	493.4	479.6	465.7	456.2	451.2	446.1	441.0	435.9
42.5°	460.2	445.8	431.5	421.9	417.0	412.1	407.2	402.2
45°	411.7	397.9	384.0	374.7	370.1	365.3	360.7	355.9
47.5°	364.6	350.9	337.0	328.0	323.7	319.5	315.2	311.0
50°	334.3	320.8	307.4	298.5	294.5	290.3	286.3	282.1
52.5°	305.7	292.7	279.7	271.3	267.5	263.7	259.9	256.1
55°	262.3	250.5	238.8	231.1	227.4	223.6	219.9	216.2
57.5°	222.7	212.0	201.2	194.2	191.1	188.0	184.9	181.8
60°	195.4	185.5	175.5	168.9	165.8	162.7	159.5	156.4
62.5°	171.8	162.2	152.7	147.1	145.2	143.4	141.5	139.6
65°	139.7	133.0	126.4	122.8	122.2	121.6	121.0	120.5
67.5°	112.7	109.7	106.7	104.8	104.2	103.6	103.0	102.3
70°	98.1	96.1	94.1	92.8	92.0	91.2	90.4	89.6
72.5°	85.3	83.7	82.1	81.0	80.5	80.1	79.6	79.1
75°	67.6	66.2	64.8	64.1	63.9	63.7	63.5	63.3
77.5°	51.1	50.4	49.6	49.1	48.7	48.5	48.1	47.8
80°	40.6	39.9	39.1	38.7	38.7	38.7	38.7	38.7
82.5°	30.7	30.2	29.8	29.5	29.5	29.5	29.5	29.5
85°	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7
87.5°	9.6	9.2	9.3	9.4	9.4	9.4	9.4	9.4
90°	21.5	20.2	21.5	22.2	22.2	22.2	22.2	22.2
92.5°	58.7	50.4	44.7	40.6	40.0	37.8	38.4	37.3
95°	176.3	135.3	107.0	92.2	83.4	78.1	76.0	76.7
97.5°	411.5	336.7	263.8	215.2	183.0	166.5	156.7	151.0
100°	614.5	531.1	438.9	357.4	301.5	272.6	253.0	240.9
102.5°	747.5	728.7	661.2	574.9	514.2	464.8	440.4	424.0
105°	817.8	893.8	902.6	880.4	838.6	796.9	767.9	758.5
107.5°	767.2	881.7	951.7	984.3	989.5	987.2	981.5	968.9
110°	723.5	844.0	930.1	985.3	1014.3	1027.1	1033.1	1032.4



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CATALOG NUMBER: SA2XXRDIP-C675D725U935-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	683.7	799.3	891.4	954.7	994.9	1016.3	1027.8	1031.4
115°	634.6	738.3	826.5	895.8	943.6	974.6	992.0	998.2
117.5°	597.8	688.8	768.8	833.8	882.5	915.2	933.7	938.7
120°	579.5	663.0	734.3	795.6	842.7	874.3	893.8	900.5
122.5°	565.0	641.4	708.9	764.3	806.6	837.7	855.1	860.7
125°	543.8	613.1	672.4	722.8	761.9	787.5	804.3	809.7
127.5°	523.0	585.7	641.5	688.1	722.2	746.1	760.7	765.0
130°	509.5	567.4	620.5	665.0	697.9	720.8	734.3	739.7
132.5°	496.5	550.2	599.0	640.8	673.2	696.0	708.4	713.3
135°	478.5	523.0	567.4	605.0	634.0	656.3	668.3	671.1
137.5°	464.2	501.3	536.6	569.4	595.8	614.9	625.5	629.6
140°	455.0	487.3	518.2	547.9	569.4	586.9	597.0	601.1
142.5°	447.5	474.9	501.5	526.3	546.8	562.7	571.7	572.5
145°	436.8	459.0	479.9	499.4	515.6	527.0	533.7	535.7
147.5°	428.6	446.1	462.4	476.6	490.0	499.1	503.7	504.9
150°	422.7	437.5	451.6	463.7	473.8	481.9	485.9	486.6
152.5°	416.7	430.5	442.5	453.0	460.9	467.9	470.9	471.0
155°	408.5	419.3	429.4	436.8	444.2	448.9	451.6	450.3
157.5°	399.0	408.0	416.5	422.2	427.5	431.4	432.7	432.7
160°	393.0	400.5	407.9	412.6	417.3	420.7	421.3	421.3
162.5°	387.1	393.5	399.8	403.5	408.1	410.4	411.1	410.5
165°	378.2	383.0	387.7	390.4	393.0	395.7	395.7	395.1
167.5°	369.8	373.4	376.6	379.1	380.3	381.8	381.6	380.8
170°	365.5	367.5	370.1	371.5	372.2	374.2	373.5	372.2
172.5°	360.6	362.1	364.3	365.1	365.8	366.7	366.0	365.2
175°	355.3	356.0	356.7	357.4	357.4	358.1	357.4	356.0
177.5°	351.6	351.6	352.1	352.1	352.1	352.1	351.6	350.5
180°	350.0	350.0	350.0	350.0	350.0	350.0	350.0	350.0

(END OF REPORT)