

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: P331460-930

Luminaire Tested: **SA2XXDIP-C1005D1080U930-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331460-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C1005D1080U930-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1080 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6431.6 lumens
Efficiency: N/A
Efficacy: 89.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

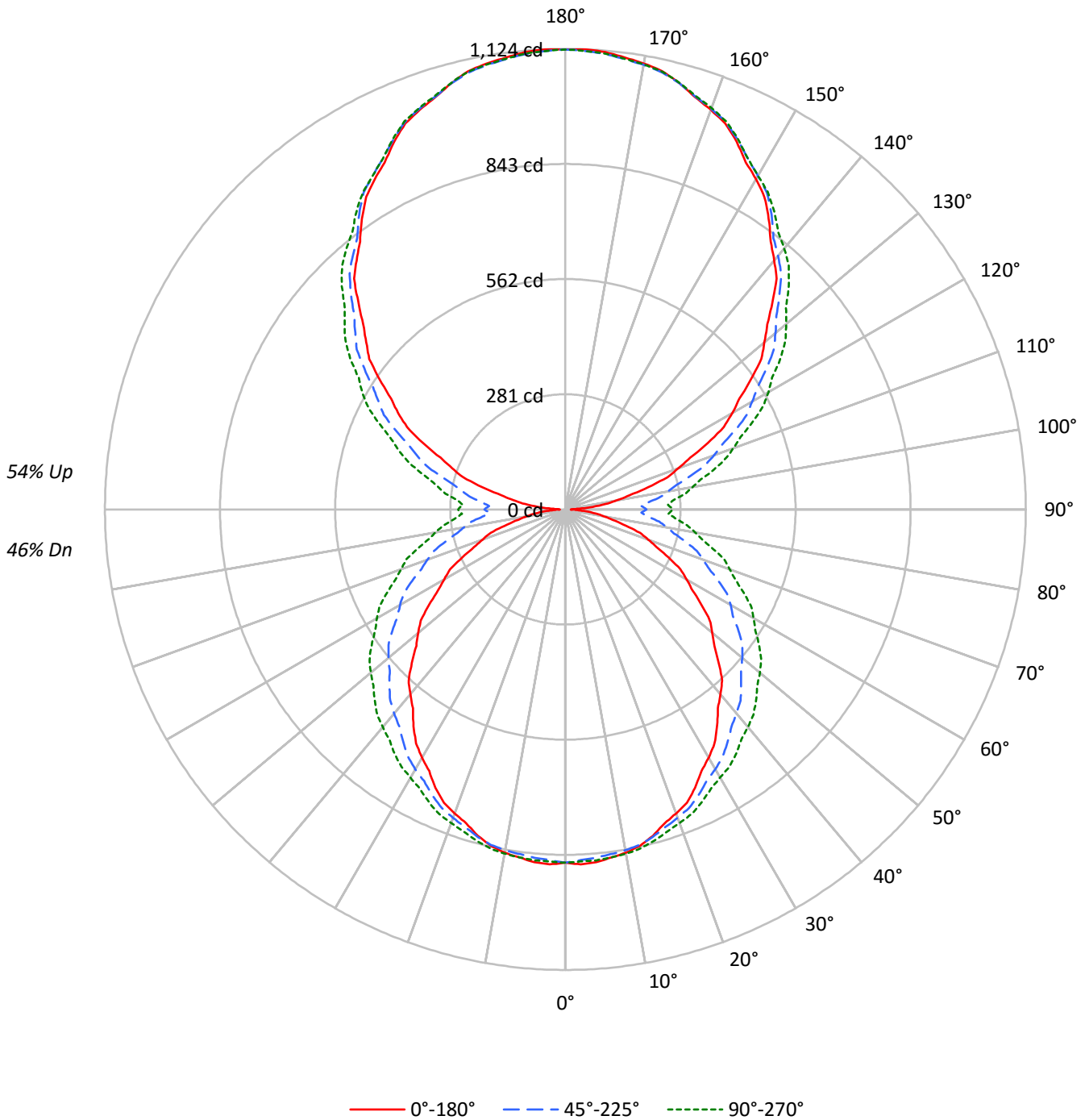
Input Watts (W): 71.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	
RCR																					
0	106	106	106	106	97	97	97	97	81	81	81	66	66	66	52	52	52	46	46	46	46
1	95	91	86	82	87	83	79	76	69	66	63	56	54	52	44	42	41	35	35	35	35
2	86	78	72	66	79	72	66	61	59	55	51	48	45	42	38	36	34	29	29	29	29
3	78	68	61	54	71	63	56	50	52	47	43	42	38	35	33	30	28	24	24	24	24
4	71	60	52	45	65	55	48	42	46	40	36	37	33	30	29	26	24	20	20	20	20
5	65	53	45	39	60	49	42	36	41	35	31	33	29	25	26	23	20	17	17	17	17
6	60	48	39	33	55	44	36	31	37	31	27	30	26	22	24	20	18	15	15	15	15
7	56	43	35	29	51	40	32	27	33	27	23	27	23	19	21	18	16	13	13	13	13
8	51	39	31	25	47	36	29	24	30	24	20	25	20	17	20	16	14	12	12	12	12
9	48	35	28	23	44	33	26	21	28	22	18	23	18	15	18	15	13	10	10	10	10
10	45	32	25	20	41	30	23	19	25	20	16	21	17	14	17	14	11	9	9	9	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13919	13919	13919
5°	13988	13400	13350
10°	13899	13004	12858
15°	13709	12584	12339
20°	13467	12136	11842
25°	13227	11701	11390
30°	12890	11257	10936
35°	12550	10828	10617
40°	12191	10461	10297
45°	11850	10133	10022
50°	11485	9837	9754
55°	11101	9519	9479
60°	10631	9187	9189
65°	10145	8801	8846
70°	9596	8384	8474
75°	8897	7976	8132
80°	7792	7559	7784
85°	6733	7197	7515



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.7	1.3
10°-20°	234.3	3.6
20°-30°	355.0	5.5
30°-40°	432.4	6.7
40°-50°	465.2	7.2
50°-60°	451.7	7.0
60°-70°	394.4	6.1
70°-80°	303.7	4.7
80°-90°	208.3	3.2
90°-100°	211.5	3.3
100°-110°	323.4	5.0
110°-120°	445.2	6.9
120°-130°	534.3	8.3
130°-140°	573.1	8.9
140°-150°	549.1	8.5
150°-160°	458.3	7.1
160°-170°	304.0	4.7
170°-180°	106.2	1.7
0°-30°	670.9	10.4
0°-40°	1103.3	17.2
0°-60°	2020.2	31.4
0°-90°	2926.5	45.5
90°-120°	980.1	15.2
90°-150°	2636.6	41.0
90°-180°	3505.0	54.5
0°-180°	6431.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	862	862	862	862	862	
5°	865	861	853	860	860	82
15°	825	827	827	838	837	232
25°	750	759	770	784	788	345
35°	646	667	691	717	727	404
45°	530	564	607	644	658	409
55°	406	452	516	559	577	363
65°	277	339	412	462	480	275
75°	154	224	304	355	374	163
85°	45	123	202	253	272	48
90°	14	98	198	244	262	11
95°	59	128	204	250	265	64
105°	210	250	316	360	375	222
115°	384	405	458	493	505	379
125°	554	564	599	629	640	495
135°	714	725	739	763	772	552
145°	866	872	878	886	889	541
155°	990	992	995	1000	997	455
165°	1077	1076	1076	1082	1078	304
175°	1120	1118	1116	1122	1117	106
180°	1122	1122	1122	1122	1122	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	862.1	862.1	862.1	862.1	862.1	862.1	862.1	862.1	862.1	862.1	862.1
2.5°	867.2	866.5	865.8	865.1	864.5	863.3	861.8	860.2	858.7	857.1	858.3
5°	864.6	863.8	863.0	862.1	861.3	860.1	858.4	856.7	855.1	853.4	855.1
7.5°	856.9	856.3	855.7	855.2	854.7	853.8	852.5	851.2	849.9	848.6	850.6
10°	850.9	850.4	849.8	849.2	848.6	848.0	847.2	846.3	845.5	844.7	846.9
12.5°	840.9	841.0	841.1	841.2	841.3	841.1	840.5	839.8	839.3	838.6	840.9
15°	824.7	825.2	825.7	826.3	826.9	827.1	827.1	827.1	827.1	827.1	829.6
17.5°	803.6	804.9	806.0	807.1	808.3	809.3	810.2	811.1	812.0	812.9	815.5
20°	789.7	791.1	792.5	793.9	795.2	796.5	797.6	798.7	799.8	801.0	804.0
22.5°	774.7	776.2	777.9	779.5	781.1	782.7	784.2	785.8	787.3	788.9	792.0
25°	749.7	751.6	753.6	755.5	757.5	759.7	762.1	764.7	767.2	769.6	773.0
27.5°	719.7	722.8	726.0	729.2	732.4	735.4	738.3	741.3	744.2	747.2	751.4
30°	699.7	703.3	706.9	710.5	714.1	717.8	721.4	725.0	728.6	732.2	736.6
32.5°	677.7	681.8	685.8	689.9	693.9	698.1	702.4	706.6	710.9	715.2	720.3
35°	646.0	650.7	655.4	660.1	664.9	669.8	675.1	680.4	685.7	691.0	697.1
37.5°	611.5	616.9	622.4	627.8	633.2	639.4	646.2	653.1	659.9	666.8	673.5
40°	588.5	594.6	600.7	606.8	612.9	619.7	627.2	634.7	642.2	649.7	657.0
42.5°	566.6	572.6	578.7	584.8	590.9	598.3	606.9	615.6	624.1	632.8	640.6
45°	529.8	537.3	544.8	552.3	559.8	568.3	578.1	587.8	597.5	607.2	615.9
47.5°	493.6	501.7	509.9	518.0	526.2	536.0	547.4	558.7	570.1	581.5	590.5
50°	468.6	477.2	485.8	494.4	503.0	513.6	526.0	538.5	551.0	563.5	573.0
52.5°	444.6	453.6	462.7	471.7	480.8	491.9	505.0	518.2	531.3	544.5	554.2
55°	406.1	416.0	426.1	436.1	446.1	458.3	472.7	487.1	501.6	516.0	526.0
57.5°	368.1	379.4	390.6	401.9	413.2	426.2	440.9	455.6	470.3	485.0	495.8
60°	341.1	353.0	365.0	376.9	388.9	402.8	418.6	434.4	450.2	466.0	476.6
62.5°	317.2	329.5	341.9	354.2	366.6	380.7	396.6	412.4	428.3	444.1	455.3
65°	277.4	291.0	304.6	318.2	331.8	346.8	363.2	379.5	395.9	412.3	423.7
67.5°	240.9	255.1	269.3	283.6	297.7	313.2	330.0	346.8	363.5	380.3	391.8
70°	214.9	229.3	243.8	258.2	272.6	288.5	305.7	322.9	340.1	357.3	369.2
72.5°	190.9	205.8	220.7	235.5	250.5	266.6	284.1	301.5	318.9	336.4	348.1
75°	153.7	169.3	184.7	200.3	215.9	232.5	250.3	268.1	285.8	303.6	315.5
77.5°	117.7	134.0	150.3	166.5	182.8	199.9	218.0	236.0	254.0	272.1	284.1
80°	93.7	110.6	127.6	144.6	161.4	179.0	197.0	215.1	233.1	251.1	262.8
82.5°	73.7	90.4	107.1	123.8	140.6	158.1	176.3	194.6	212.9	231.1	242.8
85°	45.0	62.2	79.4	96.6	113.8	131.3	149.1	166.9	184.7	202.4	214.1
87.5°	24.7	41.7	58.8	75.8	92.9	110.8	129.5	148.1	166.9	185.6	196.8
90°	13.5	32.0	50.7	69.3	88.0	108.5	130.9	153.3	175.7	198.0	208.8
92.5°	28.4	45.2	62.0	78.9	95.7	113.2	131.4	149.7	167.9	186.1	197.1
95°	59.3	74.4	89.5	104.7	119.8	136.0	153.0	170.2	187.2	204.3	214.8
97.5°	98.7	112.2	125.6	139.1	152.5	167.7	184.5	201.3	218.1	234.8	245.1
100°	129.0	141.0	153.0	164.9	176.8	190.9	207.1	223.3	239.5	255.7	266.0
102.5°	159.9	170.6	181.3	192.0	202.8	216.1	232.0	247.9	263.8	279.7	289.9
105°	209.9	218.6	227.2	235.9	244.6	256.3	271.3	286.1	300.9	315.8	326.0
107.5°	261.5	268.9	276.2	283.6	291.0	301.6	315.4	329.2	343.1	356.9	366.4
110°	293.8	300.7	307.4	314.3	321.1	331.3	345.0	358.6	372.1	385.7	394.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	330.2	336.1	342.1	348.0	353.9	363.3	376.0	388.8	401.6	414.3	422.7
115°	383.8	388.2	392.5	396.7	401.0	409.3	421.3	433.4	445.5	457.5	465.7
117.5°	435.9	439.7	443.4	447.0	450.7	457.7	468.1	478.5	488.9	499.2	507.0
120°	471.6	474.3	477.2	480.0	482.7	488.9	498.3	507.7	517.1	526.6	534.3
122.5°	504.2	506.6	509.1	511.5	514.0	519.9	529.1	538.4	547.6	556.9	563.9
125°	553.7	555.5	557.5	559.4	561.3	566.3	574.5	582.9	591.1	599.3	606.2
127.5°	603.1	605.2	607.3	609.4	611.6	615.9	622.2	628.7	635.1	641.5	647.6
130°	634.1	636.7	639.1	641.6	644.0	647.9	653.4	658.8	664.1	669.6	675.8
132.5°	669.0	671.0	672.9	674.9	676.9	680.1	684.7	689.3	693.8	698.5	703.9
135°	714.4	716.6	719.0	721.3	723.7	726.4	729.6	732.8	736.0	739.2	744.8
137.5°	763.4	765.2	767.1	768.9	770.8	772.6	774.4	776.1	777.9	779.7	784.6
140°	793.0	794.6	796.2	797.9	799.4	801.0	802.7	804.3	805.8	807.5	812.0
142.5°	823.3	824.9	826.6	828.1	829.7	831.0	831.8	832.6	833.5	834.3	838.0
145°	865.6	867.1	868.5	870.0	871.5	872.9	874.1	875.4	876.6	877.9	879.8
147.5°	904.4	906.2	907.9	909.7	911.5	912.8	913.6	914.5	915.3	916.2	916.9
150°	930.9	932.2	933.4	934.7	936.0	937.0	937.9	938.7	939.6	940.4	941.0
152.5°	954.4	955.7	956.9	958.2	959.4	960.6	961.6	962.6	963.7	964.7	965.5
155°	989.7	990.3	990.9	991.6	992.2	992.8	993.4	994.1	994.7	995.3	996.4
157.5°	1019.8	1020.2	1020.6	1021.0	1021.5	1021.8	1022.2	1022.6	1023.0	1023.4	1024.8
160°	1038.0	1038.4	1038.8	1039.2	1039.7	1039.9	1040.2	1040.4	1040.6	1040.8	1042.0
162.5°	1054.6	1054.7	1054.8	1054.8	1055.0	1055.1	1055.3	1055.5	1055.7	1056.0	1057.4
165°	1076.8	1076.6	1076.4	1076.1	1076.0	1075.9	1075.9	1075.9	1075.9	1075.9	1077.3
167.5°	1095.4	1094.7	1094.1	1093.5	1092.8	1092.5	1092.4	1092.4	1092.3	1092.3	1093.8
170°	1105.2	1104.6	1103.9	1103.3	1102.7	1102.3	1102.0	1101.8	1101.6	1101.4	1102.9
172.5°	1112.0	1111.4	1110.8	1110.1	1109.5	1109.1	1108.9	1108.6	1108.4	1108.2	1109.7
175°	1120.4	1119.7	1119.1	1118.4	1117.9	1117.3	1116.9	1116.5	1116.1	1115.6	1117.1
177.5°	1123.7	1123.2	1122.7	1122.3	1121.8	1121.3	1121.0	1120.6	1120.3	1120.0	1121.0
180°	1122.3	1122.3	1122.3	1122.3	1122.3	1122.3	1122.3	1122.3	1122.3	1122.3	1122.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	862.1	862.1	862.1	862.1	862.1	862.1	862.1	862.1
2.5°	859.3	860.5	861.6	861.9	861.4	861.0	860.5	860.1
5°	856.7	858.4	860.1	860.7	860.5	860.2	859.9	859.7
7.5°	852.6	854.7	856.6	857.5	857.2	857.0	856.6	856.4
10°	849.1	851.3	853.5	854.5	854.2	853.9	853.7	853.4
12.5°	843.1	845.3	847.5	848.5	848.2	847.9	847.7	847.4
15°	832.2	834.6	837.1	838.3	838.0	837.7	837.4	837.1
17.5°	818.2	820.8	823.4	824.7	824.7	824.7	824.7	824.7
20°	807.0	810.1	813.1	814.6	814.6	814.6	814.6	814.6
22.5°	795.0	798.1	801.1	802.9	803.3	803.8	804.2	804.7
25°	776.3	779.7	783.0	785.1	785.9	786.8	787.6	788.4
27.5°	755.6	759.9	764.1	766.5	767.1	767.7	768.3	768.9
30°	741.1	745.5	750.0	752.6	753.4	754.2	755.1	755.9
32.5°	725.5	730.5	735.6	738.9	740.5	741.9	743.5	744.9
35°	703.2	709.3	715.4	719.4	721.4	723.3	725.3	727.2
37.5°	680.3	687.1	693.8	698.2	700.3	702.4	704.4	706.5
40°	664.1	671.4	678.6	683.5	686.0	688.4	691.0	693.5
42.5°	648.5	656.4	664.3	669.4	672.0	674.5	676.9	679.5
45°	624.4	633.1	641.6	647.3	650.1	652.9	655.7	658.4
47.5°	599.5	608.5	617.5	623.5	626.6	629.7	632.7	635.8
50°	582.4	591.8	601.3	607.6	610.6	613.6	616.7	619.7
52.5°	563.9	573.5	583.2	589.6	592.9	596.2	599.5	602.8
55°	536.1	546.0	556.0	562.8	566.4	570.1	573.6	577.2
57.5°	506.6	517.4	528.2	535.3	539.0	542.7	546.3	550.0
60°	487.1	497.7	508.3	515.5	519.3	523.3	527.2	531.0
62.5°	466.5	477.7	488.9	496.4	500.0	503.7	507.4	511.0
65°	435.1	446.5	457.9	465.4	469.0	472.5	476.2	479.8
67.5°	403.3	414.8	426.3	434.0	437.7	441.5	445.3	449.1
70°	381.2	393.1	405.1	412.7	416.0	419.4	422.7	426.1
72.5°	359.8	371.5	383.2	391.1	395.1	399.1	403.1	407.1
75°	327.5	339.4	351.4	359.1	362.7	366.4	370.0	373.6
77.5°	295.9	307.8	319.7	327.6	331.4	335.3	339.2	343.1
80°	274.4	286.2	297.8	305.6	309.5	313.3	317.2	321.1
82.5°	254.5	266.1	277.8	285.4	289.1	292.8	296.4	300.1
85°	225.8	237.4	249.1	256.8	260.7	264.6	268.5	272.4
87.5°	208.1	219.3	230.6	238.0	241.6	245.2	248.7	252.3
90°	219.5	230.2	240.8	247.9	251.4	255.0	258.5	262.1
92.5°	208.0	219.0	229.9	237.1	240.4	243.9	247.2	250.6
95°	225.4	235.9	246.5	253.2	256.2	259.0	262.0	264.9
97.5°	255.4	265.7	276.0	282.7	285.9	289.2	292.4	295.6
100°	276.2	286.5	296.8	303.3	306.1	309.0	311.9	314.7
102.5°	300.1	310.4	320.6	327.1	330.0	332.8	335.7	338.5
105°	336.1	346.3	356.4	363.0	366.0	369.1	372.1	375.2
107.5°	375.9	385.4	394.8	400.6	402.8	404.9	406.9	409.0
110°	403.5	412.4	421.3	427.0	429.3	431.8	434.2	436.6



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CATALOG NUMBER: SA2XXDIP-C1005D1080U930-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	431.1	439.5	447.8	453.4	455.9	458.5	461.1	463.7
115°	473.8	481.9	490.1	495.3	497.7	500.2	502.6	505.0
117.5°	514.6	522.4	530.1	535.0	537.2	539.4	541.6	543.8
120°	542.1	549.9	557.7	562.7	565.2	567.6	570.1	572.4
122.5°	571.0	578.0	585.1	589.7	591.8	594.0	596.1	598.3
125°	613.1	620.0	626.8	631.4	633.7	635.9	638.2	640.5
127.5°	653.7	659.9	666.0	669.9	671.7	673.5	675.2	677.0
130°	682.1	688.3	694.6	698.4	699.8	701.2	702.5	703.8
132.5°	709.5	715.0	720.5	724.1	725.6	727.1	728.6	730.2
135°	750.4	756.0	761.7	765.2	766.9	768.4	770.1	771.6
137.5°	789.5	794.5	799.4	802.4	803.5	804.5	805.5	806.6
140°	816.4	820.8	825.2	827.9	828.7	829.6	830.4	831.2
142.5°	841.7	845.5	849.1	851.3	851.9	852.6	853.1	853.7
145°	881.7	883.5	885.4	886.6	887.2	887.7	888.3	888.8
147.5°	917.5	918.2	918.9	919.2	919.1	918.9	918.8	918.7
150°	941.7	942.3	943.0	943.0	942.3	941.7	941.0	940.4
152.5°	966.3	967.0	967.8	967.8	967.0	966.3	965.5	964.7
155°	997.4	998.5	999.6	999.7	999.1	998.5	997.8	997.2
157.5°	1026.2	1027.7	1029.1	1029.3	1028.3	1027.3	1026.3	1025.2
160°	1043.3	1044.6	1045.9	1046.0	1045.2	1044.4	1043.5	1042.7
162.5°	1058.8	1060.2	1061.7	1061.8	1060.9	1059.9	1058.8	1057.9
165°	1078.8	1080.3	1081.7	1081.9	1080.9	1079.9	1078.8	1077.7
167.5°	1095.3	1096.7	1098.2	1098.4	1097.3	1096.2	1095.1	1094.1
170°	1104.3	1105.8	1107.3	1107.4	1106.1	1104.9	1103.6	1102.4
172.5°	1111.2	1112.6	1114.1	1114.2	1113.0	1111.7	1110.4	1109.1
175°	1118.6	1120.1	1121.5	1121.6	1120.4	1119.1	1117.9	1116.6
177.5°	1122.0	1123.0	1124.0	1124.0	1123.0	1122.0	1121.0	1120.0
180°	1122.3	1122.3	1122.3	1122.3	1122.3	1122.3	1122.3	1122.3

(END OF REPORT)