

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: P331432-935

Luminaire Tested: **SA2XXDIP-C1005D530U935-4F0-1E-UDD-D**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331432-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C1005D530U935-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 530 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

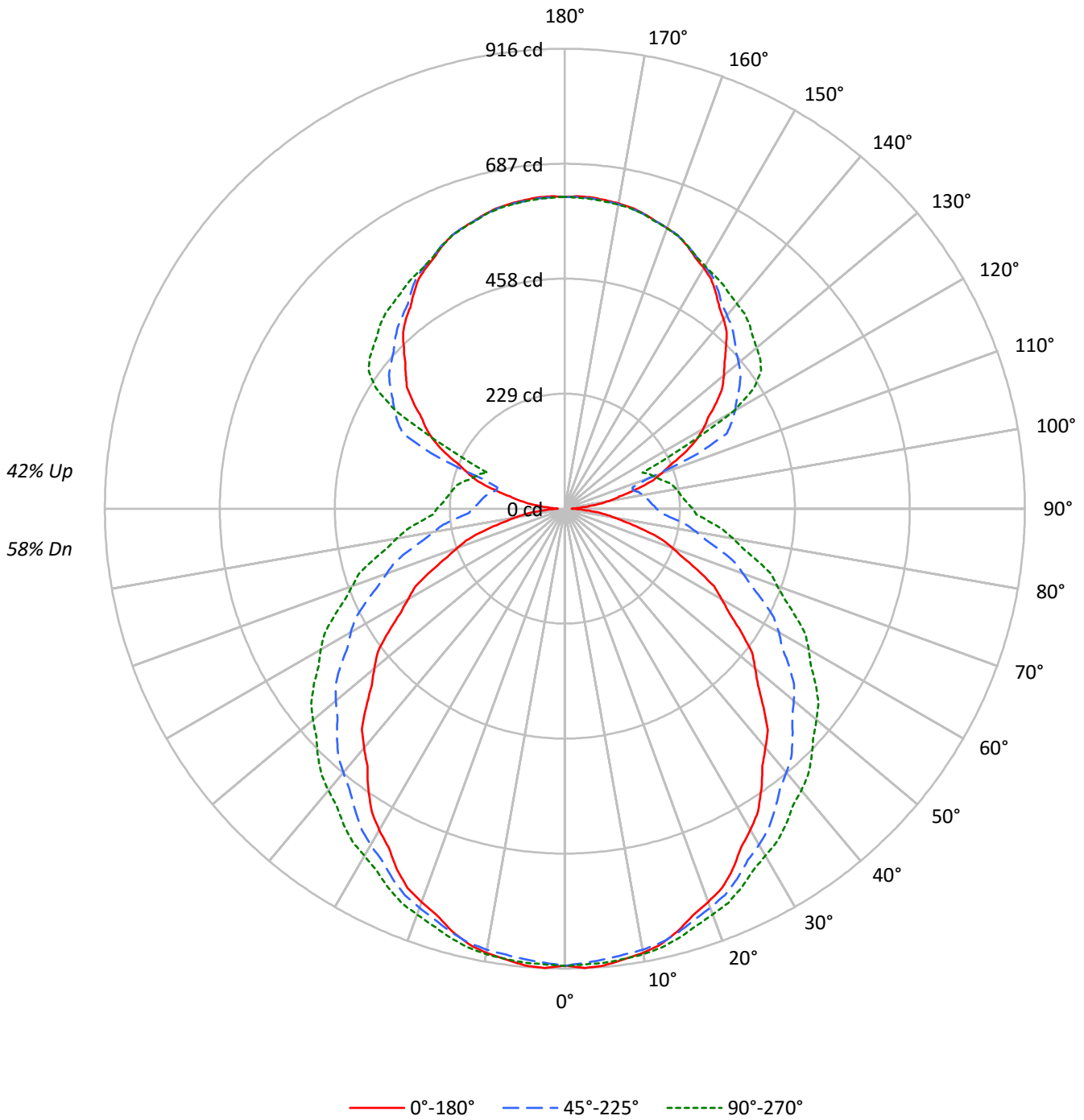
Lumens per Lamp: N/A
Luminaire Lumens: 5294.8 lumens
Efficiency: N/A
Efficacy: 96.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

Input Watts (W): 55.1
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: P331432-935
CATALOG NUMBER: SA2XXDIP-C1005D530U935-4F0-1E-UDD-D

Luminous Intensity Polar Plot





TEST NUMBER: P331432-935

CATALOG NUMBER: SA2XXDIP-C1005D530U935-4F0-1E-UDD-D

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	109	109	109	109	102	102	102	102	88	88	88	75	75	75	64	64	64	58
1	98	93	88	84	91	86	82	79	75	71	69	64	61	59	54	52	50	46
2	88	80	73	67	82	75	68	63	64	60	55	55	51	48	46	43	41	37
3	80	70	62	55	74	65	58	52	56	51	46	48	44	40	40	37	34	30
4	73	61	53	46	68	57	50	44	50	43	39	42	38	34	36	32	29	26
5	67	55	46	39	62	51	43	37	44	38	33	38	33	29	32	28	25	22
6	62	49	40	34	57	46	38	32	40	33	29	34	29	25	29	25	22	19
7	57	44	36	30	53	41	34	28	36	30	25	31	26	22	26	22	19	17
8	53	40	32	26	49	37	30	25	33	27	22	28	23	20	24	20	17	15
9	49	36	28	23	46	34	27	22	30	24	20	26	21	18	22	18	15	13
10	46	33	26	21	43	31	24	20	28	22	18	24	19	16	21	17	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14699	14699	14699
5°	14772	14150	14097
10°	14679	13733	13578
15°	14477	13289	13032
20°	14222	12815	12506
25°	13968	12358	12028
30°	13612	11889	11549
35°	13253	11434	11211
40°	12874	11047	10874
45°	12515	10702	10584
50°	12128	10388	10300
55°	11724	10052	10011
60°	11226	9702	9705
65°	10711	9294	9342
70°	10136	8856	8949
75°	9394	8423	8587
80°	8224	7984	8220
85°	7107	7603	7937



TEST NUMBER: P331432-935

CATALOG NUMBER: SA2XXDIP-C1005D530U935-4F0-1E-UDD-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.3	1.6
10°-20°	247.4	4.7
20°-30°	374.9	7.1
30°-40°	456.6	8.6
40°-50°	491.2	9.3
50°-60°	477.0	9.0
60°-70°	416.5	7.9
70°-80°	320.7	6.1
80°-90°	216.7	4.1
90°-100°	169.0	3.2
100°-110°	184.2	3.5
110°-120°	274.6	5.2
120°-130°	375.1	7.1
130°-140°	373.2	7.0
140°-150°	334.2	6.3
150°-160°	266.4	5.0
160°-170°	171.7	3.2
170°-180°	59.1	1.1
0°-30°	708.5	13.4
0°-40°	1165.2	22.0
0°-60°	2133.4	40.3
0°-90°	3087.4	58.3
90°-120°	627.7	11.9
90°-150°	1710.3	32.3
90°-180°	2207.0	41.7
0°-180°	5294.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	910	910	910	910	910	
5°	913	909	901	909	908	87
15°	871	873	874	885	884	245
25°	792	801	813	828	833	364
35°	682	705	730	758	768	426
45°	560	596	641	681	695	432
55°	429	478	545	591	610	383
65°	293	358	435	488	507	291
75°	162	237	321	375	394	172
85°	48	129	214	267	288	51
90°	14	96	183	236	255	10
95°	40	89	169	220	237	44
105°	143	189	141	190	208	153
115°	264	288	356	196	170	259
125°	368	376	425	462	477	328
135°	453	461	478	509	520	350
145°	524	524	532	542	547	328
155°	577	574	579	581	578	266
165°	608	606	607	610	607	172
175°	622	619	620	623	619	59
180°	621	621	621	621	621	



TEST NUMBER: P331432-935

CATALOG NUMBER: SA2XXDIP-C1005D530U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	910.4	910.4	910.4	910.4	910.4	910.4	910.4	910.4	910.4	910.4	910.4
2.5°	915.8	915.1	914.3	913.6	912.9	911.7	910.1	908.4	906.8	905.2	906.4
5°	913.1	912.2	911.4	910.4	909.6	908.3	906.5	904.7	903.0	901.2	903.0
7.5°	904.9	904.3	903.7	903.2	902.6	901.6	900.3	898.9	897.6	896.2	898.3
10°	898.6	898.0	897.4	896.8	896.2	895.5	894.7	893.7	892.9	892.0	894.3
12.5°	888.0	888.1	888.3	888.4	888.5	888.2	887.6	886.9	886.3	885.6	888.0
15°	870.9	871.5	872.0	872.6	873.2	873.5	873.5	873.5	873.5	873.5	876.2
17.5°	848.7	850.0	851.2	852.4	853.6	854.7	855.7	856.6	857.6	858.5	861.3
20°	834.0	835.4	836.9	838.4	839.8	841.1	842.3	843.4	844.6	845.8	849.0
22.5°	818.1	819.8	821.5	823.2	824.9	826.6	828.2	829.8	831.5	833.1	836.4
25°	791.7	793.8	795.8	797.9	800.0	802.3	804.9	807.5	810.2	812.8	816.3
27.5°	760.0	763.4	766.7	770.1	773.4	776.6	779.7	782.8	785.9	789.1	793.5
30°	738.9	742.7	746.6	750.4	754.1	758.0	761.8	765.6	769.4	773.3	777.9
32.5°	715.7	720.0	724.3	728.6	732.8	737.2	741.8	746.2	750.8	755.3	760.7
35°	682.2	687.2	692.2	697.2	702.1	707.4	713.0	718.5	724.1	729.7	736.2
37.5°	645.8	651.5	657.3	663.0	668.7	675.2	682.4	689.7	696.9	704.1	711.3
40°	621.5	627.9	634.4	640.8	647.3	654.4	662.4	670.3	678.2	686.1	693.8
42.5°	598.3	604.7	611.1	617.6	624.1	631.8	640.9	650.1	659.1	668.2	676.5
45°	559.5	567.4	575.3	583.2	591.2	600.2	610.5	620.8	631.0	641.3	650.4
47.5°	521.2	529.9	538.5	547.1	555.7	566.0	578.1	590.0	602.1	614.1	623.6
50°	494.8	503.9	513.0	522.1	531.2	542.3	555.5	568.7	581.9	595.1	605.1
52.5°	469.5	479.1	488.6	498.2	507.7	519.4	533.3	547.3	561.1	575.1	585.2
55°	428.9	439.4	450.0	460.5	471.1	484.0	499.2	514.4	529.7	544.9	555.5
57.5°	388.7	400.6	412.5	424.5	436.4	450.0	465.6	481.1	496.7	512.2	523.6
60°	360.2	372.8	385.5	398.0	410.7	425.3	442.0	458.7	475.4	492.1	503.3
62.5°	334.9	347.9	361.0	374.1	387.2	402.1	418.8	435.5	452.3	469.0	480.8
65°	292.9	307.3	321.7	336.0	350.4	366.3	383.6	400.8	418.1	435.4	447.5
67.5°	254.4	269.4	284.4	299.5	314.4	330.8	348.5	366.3	383.9	401.7	413.8
70°	227.0	242.2	257.4	272.7	287.9	304.6	322.9	341.0	359.2	377.4	389.9
72.5°	201.6	217.3	233.1	248.7	264.5	281.5	300.0	318.4	336.8	355.2	367.6
75°	162.3	178.7	195.1	211.5	228.0	245.6	264.3	283.1	301.9	320.6	333.2
77.5°	124.3	141.5	158.7	175.8	193.0	211.1	230.2	249.3	268.3	287.4	300.0
80°	98.9	116.8	134.7	152.7	170.5	189.0	208.0	227.1	246.2	265.2	277.5
82.5°	77.8	95.5	113.1	130.8	148.4	166.9	186.2	205.5	224.8	244.1	256.4
85°	47.5	65.7	83.9	102.0	120.2	138.7	157.5	176.2	195.0	213.8	226.1
87.5°	25.9	43.7	61.3	79.0	96.8	115.0	134.0	152.9	171.9	190.7	202.9
90°	13.6	31.8	49.9	67.9	86.1	104.9	124.5	144.0	163.6	183.1	195.4
92.5°	21.2	36.9	52.7	68.4	84.1	101.3	119.7	138.2	156.6	175.1	186.8
95°	39.8	50.3	60.7	71.2	81.7	96.1	114.4	132.7	150.9	169.3	180.9
97.5°	67.2	70.2	73.1	76.1	79.0	89.8	108.3	126.8	145.3	163.8	175.1
100°	88.8	85.9	83.1	80.2	77.4	85.1	103.2	121.3	139.5	157.6	169.2
102.5°	111.4	118.5	125.4	132.5	139.5	143.9	145.6	147.4	149.1	150.9	162.6
105°	143.2	154.7	166.2	177.7	189.2	188.9	176.9	164.9	152.9	140.9	152.2
107.5°	181.0	190.2	199.4	208.6	217.8	213.4	195.3	177.2	159.1	141.0	149.7
110°	204.3	212.3	220.2	228.3	236.2	232.9	218.4	204.0	189.4	175.0	174.4



TEST NUMBER: P331432-935

CATALOG NUMBER: SA2XXDIP-C1005D530U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	227.3	234.1	240.9	247.7	254.5	261.1	267.7	274.2	280.8	287.2	260.2
115°	263.6	268.5	273.5	278.4	283.4	293.6	309.4	325.0	340.7	356.4	319.0
117.5°	294.8	298.8	302.8	306.8	310.8	319.8	333.6	347.6	361.5	375.4	372.9
120°	318.5	321.2	323.8	326.5	329.2	337.3	350.8	364.3	377.8	391.4	400.8
122.5°	338.6	340.7	342.7	344.7	346.8	354.3	367.3	380.3	393.3	406.2	414.9
125°	367.9	369.3	370.6	371.9	373.2	379.4	390.7	402.0	413.3	424.6	433.2
127.5°	395.7	396.8	398.0	399.2	400.3	405.4	414.3	423.4	432.3	441.3	449.6
130°	413.4	414.7	415.9	417.2	418.5	422.8	430.1	437.3	444.6	451.9	459.9
132.5°	431.3	432.4	433.4	434.5	435.6	439.0	444.9	450.7	456.6	462.4	470.2
135°	453.3	455.0	456.5	458.1	459.8	462.4	466.3	470.1	474.0	477.8	484.9
137.5°	477.0	478.0	479.1	480.2	481.2	482.9	485.2	487.5	489.8	492.1	498.5
140°	492.4	492.9	493.4	494.0	494.5	495.6	497.2	498.9	500.6	502.3	507.9
142.5°	505.4	505.8	506.3	506.6	507.0	508.0	509.4	510.7	512.1	513.5	518.1
145°	524.3	524.3	524.2	524.1	524.0	524.8	526.5	528.1	529.9	531.6	534.0
147.5°	542.1	541.7	541.3	541.0	540.5	541.2	542.9	544.6	546.2	547.9	548.6
150°	553.5	552.8	552.2	551.5	550.8	551.2	552.8	554.4	556.0	557.6	558.2
152.5°	563.3	562.5	561.7	560.9	560.2	560.5	562.1	563.6	565.1	566.6	567.2
155°	577.4	576.5	575.6	574.7	573.8	573.9	575.1	576.4	577.6	578.8	579.4
157.5°	588.4	587.7	586.9	586.2	585.4	585.5	586.3	587.1	588.0	588.8	589.4
160°	595.0	594.3	593.7	593.1	592.5	592.5	593.1	593.7	594.3	595.0	595.6
162.5°	600.6	600.0	599.4	598.8	598.3	598.2	598.7	599.3	599.8	600.3	601.0
165°	608.4	607.8	607.2	606.6	606.0	605.9	606.1	606.4	606.7	607.0	607.8
167.5°	614.2	613.5	612.9	612.3	611.7	611.6	611.8	612.2	612.4	612.7	613.4
170°	617.3	616.8	616.2	615.6	615.0	614.8	615.0	615.2	615.4	615.6	616.3
172.5°	619.6	619.0	618.4	617.8	617.2	616.9	617.2	617.3	617.5	617.8	618.5
175°	622.3	621.6	621.0	620.3	619.5	619.3	619.5	619.7	619.8	620.1	620.8
177.5°	622.8	622.2	621.6	621.1	620.5	620.3	620.4	620.4	620.5	620.6	621.2
180°	621.0	621.0	621.0	621.0	621.0	621.0	621.0	621.0	621.0	621.0	621.0



TEST NUMBER: P331432-935

CATALOG NUMBER: SA2XXDIP-C1005D530U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	910.4	910.4	910.4	910.4	910.4	910.4	910.4	910.4
2.5°	907.5	908.7	909.9	910.2	909.7	909.3	908.8	908.4
5°	904.7	906.5	908.3	909.0	908.7	908.4	908.1	907.8
7.5°	900.4	902.6	904.7	905.6	905.3	905.0	904.7	904.4
10°	896.6	899.1	901.4	902.4	902.1	901.8	901.6	901.2
12.5°	890.4	892.7	895.0	896.0	895.8	895.4	895.2	894.9
15°	878.8	881.4	884.1	885.3	884.9	884.7	884.3	884.1
17.5°	864.0	866.8	869.5	870.9	870.9	870.9	870.9	870.9
20°	852.2	855.5	858.7	860.3	860.3	860.3	860.3	860.3
22.5°	839.6	842.8	846.0	847.9	848.3	848.9	849.3	849.8
25°	819.8	823.4	826.9	829.1	830.0	830.9	831.7	832.6
27.5°	798.0	802.5	806.9	809.4	810.1	810.7	811.4	812.0
30°	782.6	787.3	792.0	794.8	795.7	796.5	797.5	798.3
32.5°	766.1	771.5	776.9	780.3	782.0	783.5	785.1	786.7
35°	742.6	749.1	755.5	759.7	761.8	763.9	765.9	767.9
37.5°	718.4	725.6	732.7	737.4	739.5	741.8	743.9	746.1
40°	701.4	709.0	716.6	721.8	724.4	727.0	729.7	732.4
42.5°	684.8	693.2	701.5	707.0	709.6	712.3	714.9	717.6
45°	659.4	668.6	677.6	683.6	686.6	689.5	692.4	695.3
47.5°	633.1	642.6	652.1	658.5	661.7	665.0	668.1	671.4
50°	615.0	625.0	635.0	641.6	644.8	648.0	651.3	654.4
52.5°	595.5	605.6	615.9	622.7	626.1	629.6	633.1	636.5
55°	566.1	576.6	587.2	594.3	598.1	602.0	605.8	609.6
57.5°	535.0	546.4	557.8	565.3	569.2	573.1	577.0	580.8
60°	514.4	525.6	536.7	544.4	548.5	552.6	556.7	560.8
62.5°	492.7	504.5	516.3	524.2	528.1	531.9	535.8	539.7
65°	459.5	471.5	483.5	491.5	495.2	499.0	502.9	506.7
67.5°	425.9	438.1	450.2	458.3	462.3	466.2	470.3	474.2
70°	402.6	415.2	427.8	435.8	439.4	442.9	446.4	450.0
72.5°	380.0	392.4	404.7	413.0	417.2	421.5	425.7	429.9
75°	345.9	358.4	371.1	379.3	383.1	386.9	390.7	394.5
77.5°	312.5	325.0	337.6	345.9	350.0	354.1	358.3	362.3
80°	289.8	302.2	314.5	322.7	326.8	330.9	335.0	339.1
82.5°	268.7	281.0	293.3	301.4	305.3	309.2	313.1	316.9
85°	238.4	250.7	263.0	271.2	275.3	279.5	283.5	287.7
87.5°	214.9	227.0	239.0	246.9	250.7	254.5	258.3	262.1
90°	207.6	219.8	232.0	240.0	243.7	247.5	251.2	254.9
92.5°	198.6	210.3	222.1	229.8	233.4	237.1	240.7	244.4
95°	192.5	204.2	215.9	223.3	226.8	230.2	233.6	237.0
97.5°	186.3	197.6	208.9	216.3	219.8	223.4	227.0	230.6
100°	180.9	192.5	204.1	211.7	215.1	218.5	222.0	225.4
102.5°	174.2	185.9	197.5	205.1	208.6	212.1	215.6	219.1
105°	163.6	175.0	186.3	193.8	197.4	201.0	204.7	208.4
107.5°	158.5	167.2	176.0	182.2	185.8	189.4	193.0	196.7
110°	173.7	173.1	172.5	174.1	177.7	181.3	184.9	188.6



TEST NUMBER: P331432-935

CATALOG NUMBER: SA2XXDIP-C1005D530U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	233.2	206.1	179.1	167.4	170.9	174.4	178.0	181.5
115°	281.5	244.1	206.6	186.0	182.0	178.1	174.1	170.1
117.5°	370.4	367.9	365.4	353.9	333.2	312.5	292.0	271.3
120°	410.2	419.6	429.0	428.6	418.4	408.1	397.8	387.5
122.5°	423.6	432.3	441.0	445.5	445.6	445.7	445.8	446.0
125°	441.8	450.4	459.0	464.8	467.7	470.6	473.6	476.6
127.5°	457.9	466.1	474.4	479.9	482.6	485.2	487.8	490.5
130°	468.1	476.2	484.4	489.6	491.8	494.0	496.3	498.6
132.5°	477.9	485.6	493.4	498.3	500.6	502.8	505.1	507.4
135°	492.1	499.2	506.4	511.1	513.2	515.3	517.5	519.6
137.5°	504.9	511.3	517.6	521.7	523.3	525.0	526.6	528.2
140°	513.5	519.1	524.7	528.1	529.3	530.6	531.8	533.1
142.5°	522.6	527.2	531.8	534.6	535.6	536.7	537.6	538.6
145°	536.5	538.9	541.4	543.1	544.1	545.0	546.0	547.0
147.5°	549.4	550.2	551.0	551.5	551.7	552.0	552.3	552.6
150°	558.8	559.4	560.0	560.1	559.6	559.0	558.5	558.1
152.5°	567.8	568.4	569.0	568.9	568.3	567.7	567.0	566.4
155°	580.0	580.6	581.2	581.0	580.2	579.5	578.7	577.8
157.5°	590.1	590.8	591.5	591.5	590.6	589.9	589.1	588.3
160°	596.1	596.7	597.3	597.3	596.6	595.9	595.1	594.4
162.5°	601.7	602.4	603.0	603.0	602.1	601.2	600.4	599.5
165°	608.5	609.2	609.8	609.8	609.2	608.5	607.8	607.0
167.5°	614.1	614.8	615.5	615.4	614.5	613.6	612.7	611.8
170°	617.0	617.7	618.4	618.3	617.3	616.5	615.6	614.7
172.5°	619.1	619.8	620.5	620.4	619.6	618.6	617.8	616.8
175°	621.5	622.2	622.8	622.8	621.7	620.7	619.7	618.7
177.5°	621.7	622.3	622.8	622.8	622.1	621.3	620.6	619.9
180°	621.0	621.0	621.0	621.0	621.0	621.0	621.0	621.0

(END OF REPORT)