

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: P331425-940

Luminaire Tested: **SA2XXDIP-C1005D330U940-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331425-940
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: SA2XXDIP-C1005D330U940-4F0-1E-UDD-D4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 330 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

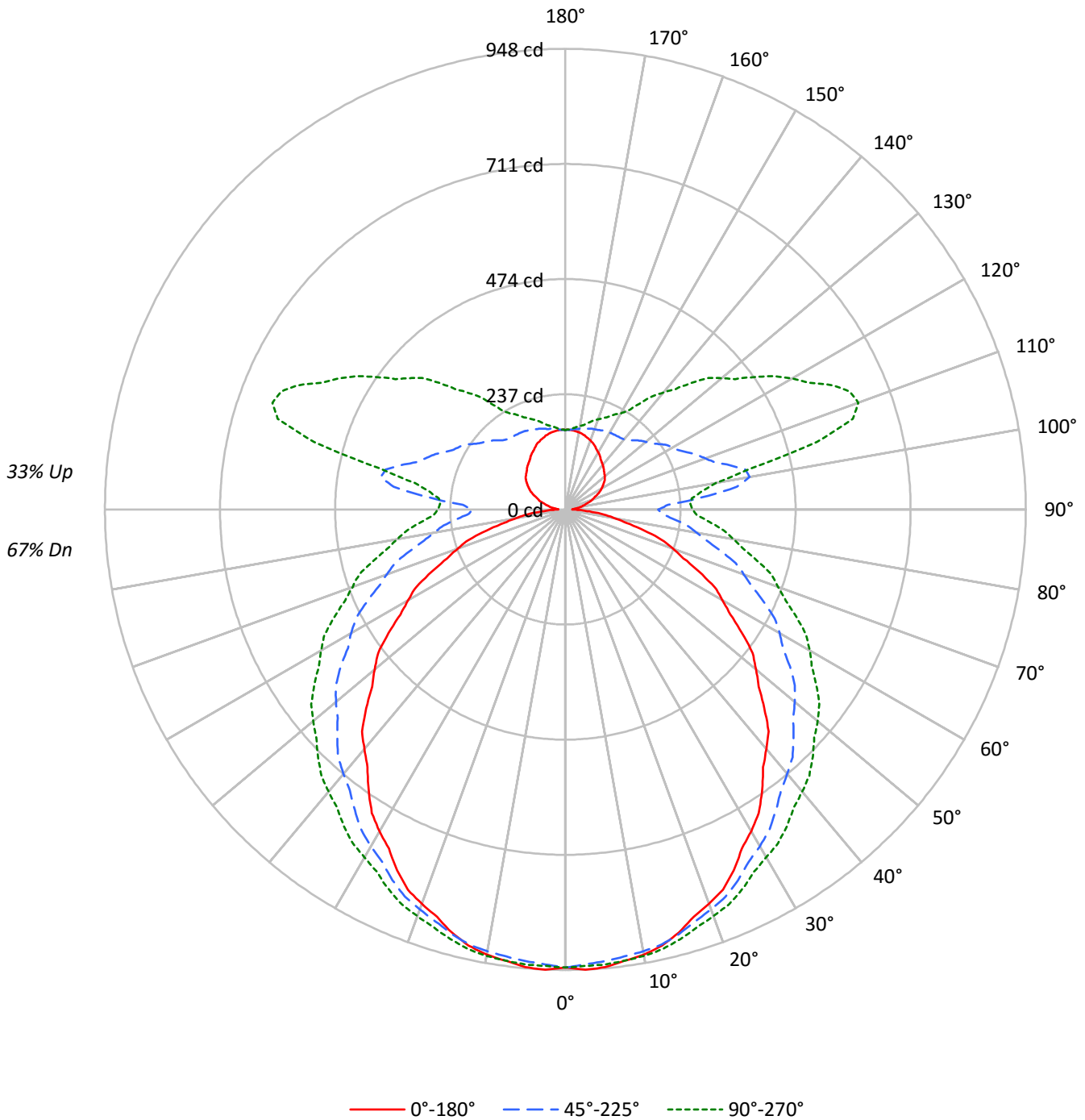
Lumens per Lamp: N/A
Luminaire Lumens: 4738.9 lumens
Efficiency: N/A
Efficacy: 95.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Direct

Input Watts (W): 49.8
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: P331425-940
CATALOG NUMBER: SA2XXDIP-C1005D330U940-4F0-1E-UDD-D4

Luminous Intensity Polar Plot





TEST NUMBER: P331425-940

CATALOG NUMBER: SA2XXDIP-C1005D330U940-4F0-1E-UDD-D4

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	111	111	111	111	105	105	105	105	93	93	93	82	82	82	72	72	72	67
1	100	94	90	85	94	89	85	81	79	75	72	69	67	64	61	59	57	53
2	90	81	74	68	84	77	70	65	68	63	58	60	56	52	52	49	46	43
3	82	71	62	56	76	67	59	53	59	53	48	52	47	43	46	42	39	35
4	74	62	53	47	70	59	51	45	52	46	41	46	41	37	40	36	33	30
5	68	55	46	40	64	52	44	38	47	40	35	41	36	31	36	32	28	25
6	63	50	41	34	59	47	39	33	42	35	30	37	32	27	33	28	25	22
7	58	45	36	30	54	42	34	29	38	31	26	34	28	24	30	25	22	19
8	54	41	32	27	50	39	31	25	35	28	23	31	25	21	27	23	19	17
9	50	37	29	24	47	35	28	23	32	25	21	28	23	19	25	21	17	15
10	47	34	26	21	44	32	25	20	29	23	19	26	21	17	23	19	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15224	15224	15224
5°	15300	14656	14600
10°	15203	14222	14063
15°	14994	13763	13496
20°	14728	13272	12952
25°	14466	12799	12457
30°	14098	12312	11962
35°	13725	11842	11611
40°	13332	11442	11262
45°	12960	11082	10962
50°	12561	10760	10668
55°	12143	10411	10368
60°	11628	10049	10051
65°	11095	9625	9675
70°	10498	9170	9268
75°	9730	8725	8894
80°	8523	8267	8514
85°	7361	7873	8218



TEST NUMBER: P331425-940

CATALOG NUMBER: SA2XXDIP-C1005D330U940-4F0-1E-UDD-D4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.3	1.9
10°-20°	256.2	5.4
20°-30°	388.3	8.2
30°-40°	472.9	10.0
40°-50°	508.8	10.7
50°-60°	494.1	10.4
60°-70°	431.4	9.1
70°-80°	332.1	7.0
80°-90°	224.4	4.7
90°-100°	219.1	4.6
100°-110°	334.4	7.1
110°-120°	310.2	6.5
120°-130°	235.7	5.0
130°-140°	173.5	3.7
140°-150°	121.0	2.6
150°-160°	82.9	1.7
160°-170°	48.8	1.0
170°-180°	15.9	0.3
0°-30°	733.8	15.5
0°-40°	1206.7	25.5
0°-60°	2209.5	46.6
0°-90°	3197.4	67.5
90°-120°	863.7	18.2
90°-150°	1393.9	29.4
90°-180°	1541.0	32.5
0°-180°	4738.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	943	943	943	943	943	
5°	946	941	933	941	940	90
15°	902	904	905	916	916	254
25°	820	830	842	858	862	377
35°	706	730	756	785	795	441
45°	579	617	664	705	720	447
55°	444	495	564	612	631	397
65°	303	371	451	505	525	301
75°	168	245	332	389	409	178
85°	49	134	221	277	298	53
90°	14	98	191	243	262	10
95°	22	103	281	254	261	20
105°	45	106	351	581	536	49
115°	73	109	277	525	605	72
125°	97	117	234	409	475	87
135°	112	134	201	317	369	87
145°	127	146	185	237	266	80
155°	144	155	179	203	211	66
165°	157	162	172	182	185	44
175°	164	164	165	167	167	16
180°	164	164	164	164	164	



TEST NUMBER: P331425-940

CATALOG NUMBER: SA2XXDIP-C1005D330U940-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	942.9	942.9	942.9	942.9	942.9	942.9	942.9	942.9	942.9	942.9	942.9
2.5°	948.4	947.7	946.9	946.2	945.5	944.2	942.5	940.8	939.1	937.5	938.7
5°	945.7	944.8	943.9	942.9	942.0	940.7	938.9	937.0	935.2	933.4	935.2
7.5°	937.2	936.6	935.9	935.4	934.8	933.8	932.4	930.9	929.6	928.2	930.3
10°	930.7	930.1	929.4	928.8	928.2	927.5	926.6	925.6	924.7	923.8	926.2
12.5°	919.7	919.8	920.0	920.1	920.2	919.9	919.3	918.6	917.9	917.2	919.7
15°	902.0	902.6	903.1	903.7	904.4	904.6	904.6	904.6	904.6	904.6	907.4
17.5°	879.0	880.3	881.5	882.8	884.0	885.2	886.2	887.2	888.1	889.1	892.0
20°	863.7	865.2	866.7	868.3	869.8	871.1	872.4	873.5	874.8	876.0	879.3
22.5°	847.3	849.0	850.8	852.6	854.3	856.0	857.7	859.4	861.1	862.8	866.2
25°	819.9	822.1	824.2	826.3	828.5	830.9	833.6	836.3	839.1	841.8	845.4
27.5°	787.1	790.6	794.1	797.5	801.0	804.3	807.5	810.7	814.0	817.3	821.8
30°	765.3	769.2	773.2	777.1	781.0	785.1	789.0	792.9	796.8	800.8	805.7
32.5°	741.2	745.6	750.1	754.6	758.9	763.5	768.2	772.8	777.6	782.2	787.8
35°	706.5	711.7	716.8	722.0	727.2	732.6	738.4	744.1	749.9	755.7	762.4
37.5°	668.8	674.8	680.7	686.6	692.6	699.3	706.8	714.3	721.8	729.2	736.6
40°	643.6	650.3	657.0	663.7	670.4	677.8	686.0	694.2	702.4	710.6	718.5
42.5°	619.6	626.2	632.9	639.6	646.3	654.3	663.8	673.2	682.6	692.1	700.6
45°	579.4	587.6	595.8	604.0	612.2	621.6	632.3	642.9	653.5	664.1	673.6
47.5°	539.8	548.8	557.7	566.6	575.5	586.2	598.7	611.1	623.6	636.0	645.9
50°	512.5	521.9	531.3	540.7	550.1	561.7	575.3	589.0	602.6	616.4	626.7
52.5°	486.2	496.1	506.0	515.9	525.8	538.0	552.3	566.8	581.1	595.6	606.1
55°	444.2	455.0	466.0	477.0	487.9	501.2	517.0	532.8	548.6	564.4	575.3
57.5°	402.6	414.9	427.2	439.6	451.9	466.1	482.2	498.3	514.4	530.5	542.2
60°	373.1	386.1	399.2	412.2	425.3	440.5	457.8	475.1	492.4	509.7	521.3
62.5°	346.9	360.3	373.9	387.4	401.0	416.4	433.7	451.0	468.4	485.7	497.9
65°	303.4	318.3	333.1	348.0	362.9	379.3	397.3	415.1	433.0	450.9	463.4
67.5°	263.5	279.0	294.5	310.1	325.7	342.6	361.0	379.3	397.6	416.0	428.6
70°	235.1	250.8	266.6	282.4	298.2	315.5	334.4	353.2	372.0	390.8	403.9
72.5°	208.8	225.1	241.4	257.6	273.9	291.6	310.7	329.8	348.8	367.9	380.7
75°	168.1	185.1	202.1	219.1	236.1	254.3	273.8	293.2	312.6	332.1	345.1
77.5°	128.8	146.5	164.3	182.1	199.9	218.6	238.4	258.2	277.9	297.7	310.7
80°	102.5	121.0	139.6	158.1	176.6	195.7	215.4	235.2	254.9	274.6	287.4
82.5°	80.6	98.9	117.2	135.5	153.7	172.9	192.9	212.9	232.8	252.8	265.6
85°	49.2	68.0	86.9	105.7	124.5	143.7	163.1	182.5	202.0	221.4	234.2
87.5°	26.8	45.1	63.5	81.7	100.0	118.9	138.7	158.5	178.3	197.9	210.2
90°	14.0	32.5	51.5	69.6	87.9	107.4	128.4	150.0	171.4	191.1	203.0
92.5°	16.4	34.5	53.1	71.0	89.5	110.0	135.9	164.6	192.3	211.5	217.0
95°	21.9	37.5	54.9	72.1	91.3	115.1	147.8	193.5	248.3	280.6	276.8
97.5°	27.6	41.9	58.0	74.9	93.5	117.1	152.8	208.5	286.7	356.2	377.8
100°	33.8	46.0	60.1	76.3	93.9	116.8	150.5	206.0	291.1	385.6	442.2
102.5°	38.5	49.5	62.6	77.9	94.7	116.9	148.9	199.6	279.1	379.2	461.5
105°	45.3	55.4	66.3	79.9	95.6	116.7	147.3	191.2	259.0	351.0	445.4
107.5°	54.0	62.2	71.3	82.8	96.7	116.5	146.1	185.7	243.8	321.9	406.2
110°	59.0	66.3	74.4	84.5	97.2	116.8	145.5	183.1	236.4	306.7	381.7



TEST NUMBER: P331425-940

CATALOG NUMBER: SA2XXDIP-C1005D330U940-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	64.6	70.9	78.2	87.1	98.6	117.6	145.1	180.7	229.8	293.6	361.9
115°	73.2	78.1	83.4	90.5	100.1	117.1	144.4	177.2	221.4	277.3	336.3
117.5°	80.8	84.3	88.3	93.8	102.1	118.3	143.5	174.2	213.6	263.1	315.5
120°	86.3	88.8	91.9	95.9	103.4	119.0	143.4	172.5	209.0	254.9	303.4
122.5°	91.7	93.1	95.5	99.1	105.8	120.9	143.8	171.0	204.9	247.3	292.3
125°	97.3	98.2	100.0	103.9	110.1	123.9	144.9	168.8	198.0	234.3	274.9
127.5°	102.8	103.8	106.1	109.9	115.7	128.5	147.4	168.0	192.8	223.4	258.7
130°	106.1	107.0	109.9	114.0	120.0	131.9	149.3	167.6	189.8	216.2	248.2
132.5°	109.1	110.3	113.4	117.8	124.0	135.2	150.6	167.2	186.6	209.5	238.3
135°	112.3	113.5	117.3	122.1	129.3	139.6	152.8	166.8	182.4	200.6	225.0
137.5°	116.5	118.0	121.7	126.7	133.8	142.7	153.9	165.6	178.3	192.6	213.3
140°	119.8	120.8	124.3	129.0	135.6	144.0	154.0	164.4	175.8	188.0	206.4
142.5°	123.1	123.8	127.1	131.8	138.1	145.7	155.1	164.7	174.8	185.8	201.4
145°	126.6	128.0	131.1	135.8	142.1	149.0	157.6	166.4	175.1	184.6	196.5
147.5°	132.0	132.9	135.9	140.3	145.5	151.7	159.7	167.5	175.4	183.5	192.5
150°	135.5	136.4	138.9	143.0	147.8	153.5	160.7	167.9	175.1	182.7	190.3
152.5°	139.0	139.5	142.0	145.5	150.1	155.2	161.7	168.2	174.7	181.5	188.5
155°	144.0	144.3	146.2	149.6	153.1	157.8	163.2	168.5	173.9	179.2	185.3
157.5°	148.1	148.5	150.0	153.0	155.8	159.7	164.3	168.5	172.5	177.0	182.2
160°	150.9	151.2	152.5	155.0	157.6	161.0	164.8	168.5	171.7	175.5	179.9
162.5°	153.7	153.5	154.8	156.8	159.1	161.8	165.1	168.3	170.9	174.2	177.9
165°	156.9	156.6	157.2	159.1	160.7	162.6	165.4	167.6	169.5	171.7	174.5
167.5°	159.5	159.2	159.7	161.0	162.1	163.3	165.3	167.2	168.1	169.5	171.3
170°	161.3	160.7	161.0	161.9	162.6	163.5	165.1	166.7	167.3	168.3	169.5
172.5°	162.3	161.9	161.8	162.7	163.1	163.8	164.9	165.9	166.3	166.7	167.7
175°	163.5	163.2	162.9	163.5	163.5	163.8	164.4	165.1	164.8	165.1	165.4
177.5°	164.1	163.5	163.4	163.8	163.8	163.8	164.1	164.6	164.1	163.8	164.1
180°	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8



TEST NUMBER: P331425-940
 CATALOG NUMBER: SA2XXDIP-C1005D330U940-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	942.9	942.9	942.9	942.9	942.9	942.9	942.9	942.9
2.5°	939.9	941.1	942.4	942.7	942.2	941.7	941.2	940.8
5°	937.0	938.9	940.7	941.4	941.1	940.8	940.5	940.2
7.5°	932.6	934.8	936.9	937.9	937.5	937.3	936.9	936.7
10°	928.6	931.1	933.5	934.6	934.2	934.0	933.7	933.4
12.5°	922.1	924.5	926.9	928.0	927.7	927.4	927.1	926.8
15°	910.2	912.8	915.6	916.9	916.5	916.2	915.9	915.6
17.5°	894.8	897.7	900.5	902.0	902.0	902.0	902.0	902.0
20°	882.6	886.0	889.3	891.0	891.0	891.0	891.0	891.0
22.5°	869.5	872.9	876.2	878.2	878.6	879.1	879.6	880.1
25°	849.1	852.7	856.4	858.6	859.6	860.5	861.4	862.3
27.5°	826.4	831.1	835.7	838.3	839.0	839.6	840.3	841.0
30°	810.6	815.4	820.3	823.1	824.0	824.9	825.9	826.8
32.5°	793.4	799.0	804.6	808.2	809.9	811.5	813.2	814.8
35°	769.1	775.8	782.5	786.8	789.0	791.1	793.3	795.3
37.5°	744.0	751.4	758.8	763.7	765.9	768.2	770.4	772.7
40°	726.4	734.3	742.2	747.5	750.3	753.0	755.7	758.5
42.5°	709.3	717.9	726.6	732.2	734.9	737.7	740.4	743.2
45°	683.0	692.4	701.8	708.0	711.1	714.1	717.1	720.1
47.5°	655.7	665.5	675.4	682.0	685.3	688.7	692.0	695.4
50°	636.9	647.3	657.6	664.5	667.8	671.1	674.5	677.8
52.5°	616.7	627.2	637.8	644.9	648.5	652.1	655.7	659.2
55°	586.3	597.2	608.1	615.5	619.5	623.5	627.4	631.3
57.5°	554.1	565.9	577.7	585.5	589.5	593.5	597.5	601.5
60°	532.8	544.4	555.9	563.8	568.0	572.3	576.6	580.8
62.5°	510.2	522.5	534.8	542.9	546.9	550.9	554.9	558.9
65°	475.9	488.3	500.8	509.0	512.9	516.8	520.8	524.8
67.5°	441.1	453.7	466.3	474.7	478.8	482.9	487.1	491.2
70°	417.0	430.0	443.1	451.4	455.0	458.7	462.4	466.0
72.5°	393.5	406.4	419.1	427.8	432.1	436.5	440.9	445.2
75°	358.2	371.2	384.3	392.8	396.7	400.7	404.7	408.6
77.5°	323.6	336.6	349.6	358.3	362.5	366.8	371.0	375.2
80°	300.1	313.0	325.7	334.2	338.5	342.7	347.0	351.2
82.5°	278.3	291.1	303.8	312.2	316.2	320.2	324.2	328.2
85°	246.9	259.7	272.4	280.9	285.2	289.4	293.6	297.9
87.5°	222.5	234.8	247.3	255.5	259.4	263.2	267.2	271.0
90°	214.7	226.3	239.1	247.3	250.9	254.6	258.2	261.8
92.5°	221.9	229.8	239.1	244.9	248.3	250.9	254.9	258.0
95°	262.8	255.1	253.4	254.0	253.6	254.8	257.4	261.4
97.5°	360.5	336.7	313.9	298.5	287.0	282.9	281.9	282.8
100°	446.7	418.9	387.0	356.1	333.4	323.2	317.4	315.0
102.5°	500.9	503.1	482.5	449.2	424.2	404.4	396.4	392.0
105°	521.6	567.8	582.6	579.2	562.9	546.7	536.5	535.5
107.5°	485.8	549.7	592.6	614.7	620.5	622.8	623.4	620.8
110°	457.9	524.0	574.1	606.5	623.3	632.7	638.8	641.9



TEST NUMBER: P331425-940

CATALOG NUMBER: SA2XXDIP-C1005D330U940-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	431.6	495.4	548.2	584.4	606.5	619.9	628.7	633.6
115°	397.3	455.0	505.3	544.0	569.7	587.5	599.1	605.3
117.5°	368.6	420.2	466.6	503.1	529.0	547.4	559.1	564.6
120°	352.5	400.1	442.0	476.5	501.9	520.1	532.6	539.0
122.5°	338.7	382.7	422.6	454.1	476.7	494.1	505.1	510.6
125°	317.4	358.1	394.0	423.1	444.1	458.8	469.4	474.7
127.5°	296.5	333.4	367.0	394.0	412.6	426.5	436.0	440.7
130°	283.1	317.5	349.7	375.3	393.2	406.4	415.1	420.1
132.5°	270.0	302.2	332.1	356.3	374.0	387.1	395.4	400.0
135°	251.8	278.9	306.1	328.1	344.2	357.0	365.1	368.8
137.5°	235.6	258.5	280.6	299.8	314.2	325.3	332.3	336.3
140°	225.4	245.4	264.7	282.0	293.9	303.9	310.4	314.1
142.5°	217.8	234.5	250.8	265.2	276.3	285.3	291.1	293.1
145°	208.1	220.3	231.9	242.7	251.8	258.7	263.3	265.8
147.5°	201.1	209.6	217.4	224.6	231.6	236.6	239.4	240.8
150°	197.9	204.8	211.4	217.0	221.8	225.6	227.5	227.8
152.5°	195.1	201.5	207.1	212.0	215.8	219.0	220.4	220.5
155°	191.3	196.3	201.0	204.5	207.9	210.2	211.4	210.8
157.5°	186.8	191.0	194.9	197.7	200.1	202.0	202.5	202.5
160°	184.0	187.4	190.9	193.1	195.4	196.9	197.2	197.2
162.5°	181.2	184.2	187.2	188.9	191.1	192.2	192.4	192.2
165°	177.1	179.2	181.5	182.7	184.0	185.3	185.3	184.9
167.5°	173.1	174.8	176.3	177.5	178.0	178.7	178.6	178.3
170°	171.1	172.0	173.3	173.9	174.2	175.1	174.9	174.2
172.5°	168.8	169.5	170.5	170.9	171.2	171.7	171.3	170.9
175°	166.4	166.7	167.0	167.3	167.3	167.6	167.3	166.7
177.5°	164.6	164.6	164.9	164.9	164.9	164.9	164.6	164.1
180°	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8

(END OF REPORT)