

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: P331424-830

Luminaire Tested: **SA2XXDIP-C1005D330U830-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331424-830
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-C1005D330U830-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 330 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

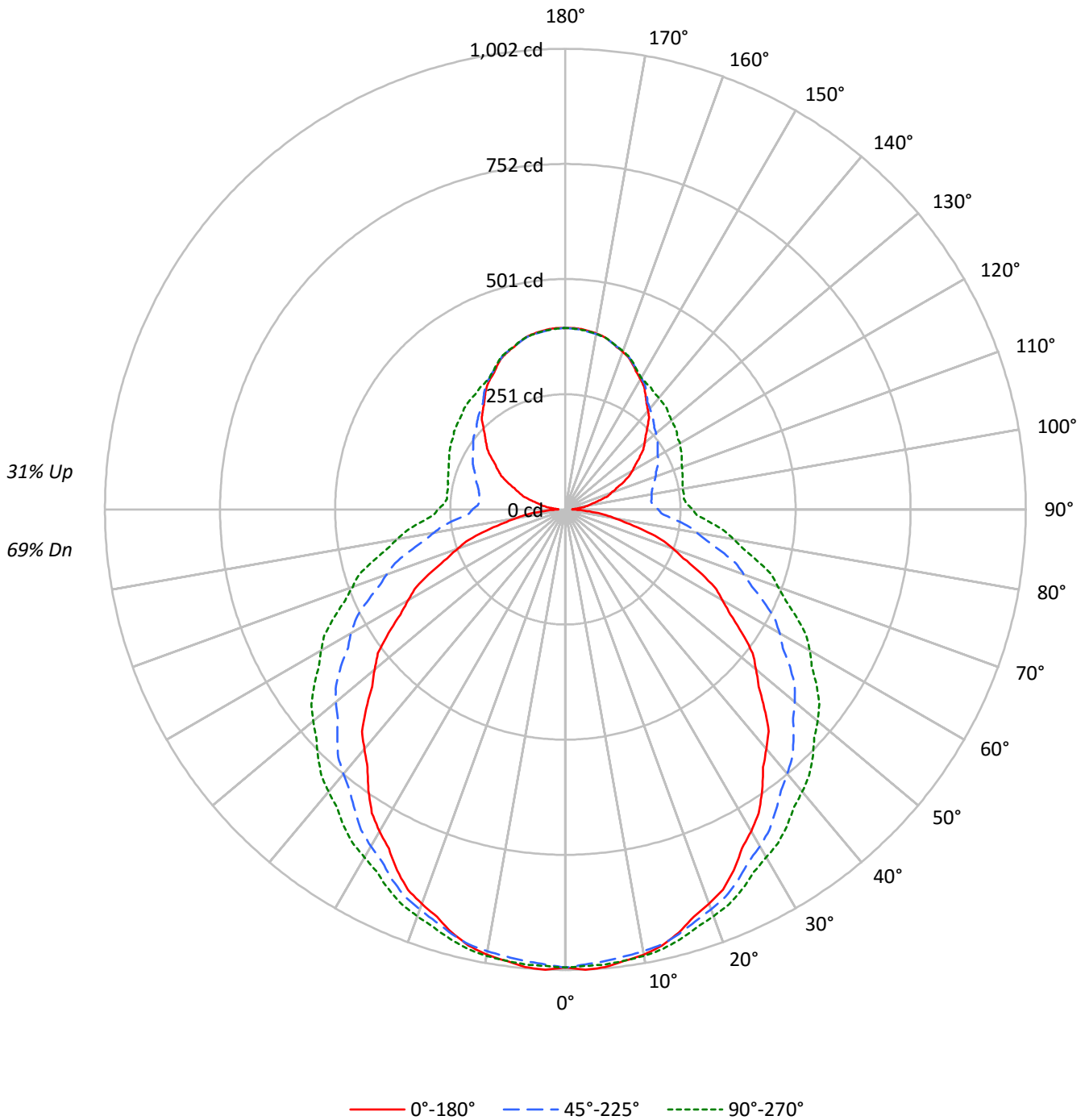
Lumens per Lamp: N/A
Luminaire Lumens: 4907.4 lumens
Efficiency: N/A
Efficacy: 98.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Direct

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



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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	112	112	112	112	105	105	105	105	94	94	94	83	83	83	73	73	73	69
1	100	95	90	85	94	89	85	81	79	76	73	70	68	65	62	60	58	54
2	90	81	74	68	85	77	70	65	68	63	59	60	56	53	53	50	47	43
3	82	71	63	56	77	67	59	53	60	54	49	53	48	44	46	43	39	36
4	75	62	54	47	70	59	51	45	53	46	41	47	41	37	41	37	33	30
5	68	55	46	40	64	53	44	38	47	40	35	42	36	32	37	32	29	26
6	63	50	41	34	59	47	39	33	42	35	30	38	32	28	33	29	25	22
7	58	45	36	30	55	43	35	29	38	31	27	34	29	24	30	26	22	20
8	54	41	32	27	51	39	31	26	35	28	24	31	26	22	28	23	20	17
9	50	37	29	24	47	35	28	23	32	26	21	29	23	19	26	21	18	16
10	47	34	26	21	44	33	25	21	29	23	19	27	21	18	24	19	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16091	16091	16091
5°	16172	15491	15432
10°	16069	15033	14865
15°	15848	14548	14266
20°	15567	14030	13691
25°	15292	13528	13167
30°	14902	13015	12643
35°	14508	12517	12274
40°	14092	12094	11903
45°	13700	11715	11587
50°	13277	11373	11276
55°	12834	11004	10959
60°	12292	10623	10624
65°	11728	10173	10227
70°	11096	9693	9797
75°	10286	9222	9401
80°	9006	8739	9001
85°	7780	8321	8687



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.4	1.9
10°-20°	270.8	5.5
20°-30°	410.4	8.4
30°-40°	499.9	10.2
40°-50°	537.8	11.0
50°-60°	522.2	10.6
60°-70°	456.0	9.3
70°-80°	351.0	7.2
80°-90°	237.2	4.8
90°-100°	187.3	3.8
100°-110°	196.2	4.0
110°-120°	211.0	4.3
120°-130°	218.3	4.4
130°-140°	214.3	4.4
140°-150°	195.3	4.0
150°-160°	161.1	3.3
160°-170°	106.9	2.2
170°-180°	37.4	0.8
0°-30°	775.7	15.8
0°-40°	1275.5	26.0
0°-60°	2335.5	47.6
0°-90°	3379.7	68.9
90°-120°	594.5	12.1
90°-150°	1222.3	24.9
90°-180°	1528.0	31.1
0°-180°	4907.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	997	997	997	997	997	
5°	1000	995	987	995	994	95
15°	953	956	956	968	968	268
25°	867	877	890	906	911	398
35°	747	772	799	829	841	467
45°	612	652	702	745	761	473
55°	470	523	596	647	667	420
65°	321	392	477	534	555	318
75°	178	259	351	411	432	188
85°	52	142	234	292	315	56
90°	15	103	202	257	277	11
95°	29	101	188	240	259	29
105°	79	124	198	247	265	84
115°	139	159	221	263	279	137
125°	197	202	245	282	296	176
135°	252	256	271	300	312	195
145°	304	307	309	318	324	190
155°	348	349	350	352	351	160
165°	379	378	378	380	379	107
175°	394	393	392	394	393	37
180°	395	395	395	395	395	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	996.6	996.6	996.6	996.6	996.6	996.6	996.6	996.6	996.6	996.6	996.6
2.5°	1002.5	1001.7	1000.9	1000.1	999.4	998.1	996.3	994.5	992.7	990.9	992.2
5°	999.6	998.6	997.7	996.6	995.7	994.3	992.4	990.4	988.5	986.6	988.5
7.5°	990.6	990.0	989.3	988.7	988.1	987.0	985.5	984.0	982.6	981.1	983.4
10°	983.7	983.1	982.4	981.8	981.1	980.3	979.4	978.4	977.4	976.5	979.0
12.5°	972.1	972.2	972.4	972.5	972.6	972.3	971.7	970.9	970.3	969.5	972.1
15°	953.4	954.0	954.6	955.3	955.9	956.2	956.2	956.2	956.2	956.2	959.1
17.5°	929.1	930.5	931.8	933.1	934.4	935.7	936.7	937.7	938.8	939.8	942.8
20°	912.9	914.5	916.2	917.8	919.4	920.8	922.1	923.3	924.6	926.0	929.4
22.5°	895.6	897.4	899.3	901.2	903.1	904.8	906.6	908.4	910.2	912.0	915.6
25°	866.7	868.9	871.2	873.5	875.7	878.3	881.1	884.0	886.9	889.8	893.6
27.5°	832.0	835.7	839.3	843.0	846.7	850.2	853.6	857.0	860.4	863.8	868.6
30°	808.9	813.0	817.3	821.4	825.6	829.8	834.0	838.1	842.3	846.5	851.6
32.5°	783.4	788.2	792.9	797.6	802.2	807.0	812.0	816.9	821.9	826.8	832.7
35°	746.8	752.2	757.7	763.2	768.6	774.4	780.5	786.6	792.7	798.8	805.9
37.5°	706.9	713.2	719.5	725.8	732.1	739.1	747.1	755.0	762.9	770.8	778.6
40°	680.3	687.4	694.5	701.5	708.6	716.4	725.1	733.8	742.4	751.1	759.5
42.5°	655.0	661.9	669.0	676.1	683.2	691.6	701.6	711.6	721.5	731.5	740.6
45°	612.5	621.1	629.8	638.5	647.1	657.0	668.4	679.6	690.8	702.0	712.0
47.5°	570.6	580.0	589.5	598.9	608.3	619.6	632.8	645.9	659.1	672.2	682.7
50°	541.7	551.7	561.6	571.6	581.5	593.7	608.1	622.5	637.0	651.5	662.4
52.5°	514.0	524.4	534.9	545.4	555.8	568.6	583.8	599.1	614.3	629.5	640.6
55°	469.5	481.0	492.6	504.2	515.7	529.8	546.5	563.2	579.9	596.5	608.1
57.5°	425.6	438.6	451.6	464.7	477.7	492.7	509.7	526.7	543.8	560.7	573.2
60°	394.4	408.1	422.0	435.7	449.6	465.6	483.9	502.2	520.5	538.8	551.0
62.5°	366.6	380.9	395.2	409.5	423.9	440.2	458.5	476.7	495.1	513.4	526.3
65°	320.7	336.4	352.1	367.9	383.6	401.0	419.9	438.8	457.7	476.6	489.8
67.5°	278.5	294.9	311.3	327.8	344.2	362.1	381.5	401.0	420.3	439.7	453.0
70°	248.5	265.1	281.8	298.5	315.2	333.5	353.5	373.3	393.2	413.1	426.9
72.5°	220.7	237.9	255.1	272.3	289.5	308.2	328.4	348.6	368.7	388.9	402.4
75°	177.7	195.7	213.6	231.6	249.6	268.8	289.4	309.9	330.5	351.0	364.8
77.5°	136.1	154.9	173.7	192.5	211.3	231.1	252.0	272.9	293.7	314.6	328.4
80°	108.3	127.9	147.5	167.1	186.6	206.9	227.7	248.6	269.5	290.3	303.8
82.5°	85.2	104.5	123.9	143.2	162.5	182.8	203.9	225.0	246.1	267.2	280.7
85°	52.0	71.9	91.8	111.7	131.6	151.8	172.4	192.9	213.5	234.0	247.5
87.5°	28.4	47.7	67.0	86.3	105.7	125.7	146.6	167.4	188.3	209.2	222.3
90°	14.8	34.3	53.8	73.3	92.8	113.7	135.8	158.0	180.1	202.4	215.0
92.5°	19.2	37.2	55.2	73.1	91.1	110.2	130.4	150.5	170.7	190.9	203.5
95°	28.8	44.7	60.5	76.3	92.2	109.8	129.2	148.6	168.1	187.5	199.6
97.5°	41.8	55.8	69.8	84.0	98.0	114.4	133.2	151.9	170.8	189.5	201.4
100°	52.4	64.8	77.4	89.8	102.3	117.6	135.8	154.0	172.2	190.4	202.3
102.5°	62.4	73.8	85.1	96.4	107.7	122.2	140.0	157.8	175.5	193.2	204.9
105°	78.8	88.3	97.8	107.4	117.0	130.2	146.9	163.8	180.7	197.5	208.9
107.5°	96.8	104.5	112.4	120.1	127.9	139.8	155.7	171.7	187.7	203.7	214.5
110°	107.4	114.2	121.1	127.9	134.8	146.1	161.8	177.6	193.3	209.1	219.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	120.2	125.9	131.8	137.6	143.5	153.8	168.7	183.6	198.5	213.5	223.6
115°	139.0	143.0	146.9	150.9	154.9	164.0	178.3	192.6	206.9	221.2	230.7
117.5°	156.3	159.2	162.1	165.0	168.0	175.9	188.8	201.7	214.7	227.6	237.0
120°	168.8	170.7	172.6	174.5	176.3	183.4	195.7	207.9	220.2	232.4	241.4
122.5°	180.3	181.5	182.8	184.0	185.2	191.6	203.3	214.9	226.6	238.3	246.8
125°	196.7	197.4	198.0	198.7	199.3	204.7	214.8	224.8	234.9	244.9	253.4
127.5°	214.1	214.6	215.1	215.7	216.1	220.5	228.5	236.5	244.5	252.5	260.2
130°	225.0	225.6	226.3	227.0	227.5	231.2	237.8	244.4	251.0	257.6	265.1
132.5°	237.2	237.7	238.2	238.7	239.1	242.0	247.2	252.4	257.7	262.9	270.0
135°	252.2	253.0	253.8	254.7	255.4	257.5	260.9	264.3	267.6	271.0	277.7
137.5°	269.5	270.0	270.6	271.3	271.8	273.0	274.6	276.2	277.8	279.4	285.2
140°	279.8	280.2	280.5	280.9	281.3	281.9	282.9	283.9	284.9	286.0	291.1
142.5°	290.5	290.9	291.2	291.5	291.9	292.2	292.6	293.0	293.4	293.8	297.9
145°	304.3	304.9	305.4	305.9	306.4	306.9	307.4	307.8	308.2	308.7	310.7
147.5°	318.0	318.7	319.2	319.9	320.5	320.9	321.2	321.6	321.9	322.2	322.5
150°	327.3	327.8	328.2	328.7	329.1	329.5	329.8	330.1	330.4	330.6	330.9
152.5°	335.6	336.0	336.5	337.0	337.3	337.8	338.1	338.5	338.8	339.2	339.5
155°	348.0	348.2	348.5	348.6	348.8	349.1	349.3	349.5	349.8	350.0	350.3
157.5°	358.5	358.7	358.8	359.0	359.2	359.3	359.5	359.6	359.7	359.9	360.3
160°	365.0	365.1	365.2	365.4	365.5	365.7	365.7	365.8	365.9	366.0	366.4
162.5°	370.8	370.9	370.9	370.9	371.0	371.0	371.1	371.2	371.3	371.3	371.8
165°	378.6	378.5	378.4	378.4	378.3	378.2	378.2	378.2	378.2	378.2	378.8
167.5°	385.1	384.9	384.7	384.5	384.3	384.2	384.1	384.1	384.1	384.1	384.6
170°	388.6	388.4	388.1	388.0	387.8	387.6	387.5	387.4	387.4	387.3	387.8
172.5°	391.0	390.8	390.6	390.3	390.1	389.9	389.9	389.8	389.7	389.6	390.2
175°	394.0	393.7	393.5	393.2	393.0	392.9	392.8	392.6	392.4	392.3	392.8
177.5°	395.1	394.9	394.7	394.6	394.5	394.3	394.2	394.1	393.9	393.8	394.2
180°	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	996.6	996.6	996.6	996.6	996.6	996.6	996.6	996.6
2.5°	993.4	994.8	996.1	996.5	995.9	995.4	994.9	994.4
5°	990.4	992.4	994.3	995.0	994.8	994.5	994.1	993.8
7.5°	985.7	988.1	990.3	991.4	991.0	990.7	990.3	990.0
10°	981.6	984.2	986.7	987.9	987.5	987.2	986.9	986.6
12.5°	974.7	977.2	979.8	980.9	980.6	980.2	980.0	979.7
15°	962.1	964.9	967.8	969.1	968.7	968.5	968.1	967.8
17.5°	945.8	948.9	951.9	953.4	953.4	953.4	953.4	953.4
20°	932.9	936.5	940.0	941.8	941.8	941.8	941.8	941.8
22.5°	919.1	922.7	926.1	928.2	928.7	929.3	929.7	930.3
25°	897.5	901.4	905.2	907.6	908.6	909.6	910.5	911.4
27.5°	873.5	878.4	883.4	886.1	886.8	887.5	888.3	888.9
30°	856.8	861.9	867.0	870.1	871.0	871.9	873.0	873.9
32.5°	838.7	844.5	850.5	854.2	856.0	857.7	859.5	861.2
35°	812.9	820.0	827.1	831.7	834.0	836.2	838.5	840.7
37.5°	786.5	794.3	802.1	807.2	809.5	812.0	814.4	816.7
40°	767.8	776.2	784.5	790.1	793.1	795.9	798.8	801.7
42.5°	749.7	758.8	768.0	773.9	776.8	779.8	782.6	785.5
45°	721.9	731.9	741.8	748.4	751.6	754.8	758.0	761.2
47.5°	693.1	703.4	713.9	720.9	724.3	727.9	731.4	735.0
50°	673.3	684.2	695.1	702.4	705.9	709.4	712.9	716.4
52.5°	651.9	663.0	674.2	681.6	685.4	689.3	693.1	696.8
55°	619.7	631.2	642.8	650.6	654.8	659.0	663.2	667.3
57.5°	585.7	598.1	610.6	618.9	623.1	627.4	631.6	635.8
60°	563.2	575.4	587.6	596.0	600.4	604.9	609.4	613.9
62.5°	539.3	552.2	565.2	573.8	578.1	582.3	586.5	590.8
65°	503.0	516.1	529.3	538.0	542.2	546.3	550.5	554.7
67.5°	466.3	479.6	492.9	501.7	506.1	510.4	514.8	519.2
70°	440.7	454.5	468.3	477.1	481.0	484.8	488.7	492.6
72.5°	415.9	429.5	443.0	452.1	456.8	461.4	466.0	470.6
75°	378.6	392.4	406.2	415.2	419.3	423.6	427.7	431.9
77.5°	342.0	355.8	369.6	378.7	383.1	387.7	392.2	396.6
80°	317.3	330.8	344.3	353.3	357.8	362.2	366.7	371.3
82.5°	294.2	307.6	321.1	330.0	334.2	338.5	342.7	346.9
85°	261.0	274.5	287.9	296.9	301.4	305.9	310.4	314.9
87.5°	235.4	248.4	261.5	270.0	274.2	278.3	282.4	286.5
90°	227.7	240.4	253.1	261.4	265.3	269.3	273.1	277.1
92.5°	216.1	228.7	241.3	249.6	253.4	257.3	261.2	265.0
95°	211.8	224.0	236.2	244.2	247.9	251.6	255.2	259.0
97.5°	213.3	225.2	237.0	244.9	248.6	252.4	256.2	260.0
100°	214.1	226.0	237.9	245.5	249.0	252.5	255.9	259.4
102.5°	216.6	228.3	240.0	247.5	251.0	254.4	257.9	261.4
105°	220.3	231.7	243.0	250.4	254.0	257.5	261.1	264.6
107.5°	225.4	236.2	247.0	254.1	257.3	260.4	263.6	266.8
110°	229.5	239.8	250.1	256.8	260.2	263.5	266.8	270.1



TEST NUMBER: P331424-830

CATALOG NUMBER: SA2XXDIP-C1005D330U830-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	233.7	243.7	253.8	260.5	263.9	267.3	270.7	274.0
115°	240.3	249.9	259.4	265.9	269.2	272.5	275.8	279.1
117.5°	246.3	255.6	264.9	271.1	274.2	277.2	280.2	283.3
120°	250.3	259.4	268.3	274.5	277.8	281.1	284.5	287.8
122.5°	255.3	263.9	272.5	278.1	281.0	283.9	286.7	289.5
125°	261.8	270.2	278.7	284.4	287.1	289.9	292.8	295.6
127.5°	267.9	275.6	283.2	288.4	291.0	293.6	296.1	298.8
130°	272.7	280.2	287.8	292.7	294.9	297.3	299.5	301.8
132.5°	277.1	284.3	291.3	296.1	298.4	300.8	303.1	305.4
135°	284.3	291.0	297.7	302.2	304.4	306.8	309.2	311.5
137.5°	291.1	296.9	302.7	306.6	308.5	310.4	312.3	314.1
140°	296.2	301.3	306.5	309.9	311.5	313.1	314.7	316.4
142.5°	302.1	306.2	310.4	313.2	314.5	315.9	317.4	318.7
145°	312.7	314.7	316.7	318.4	319.6	320.9	322.3	323.6
147.5°	323.0	323.4	323.9	324.2	324.8	325.3	325.7	326.2
150°	331.1	331.3	331.6	331.6	331.3	331.1	330.9	330.6
152.5°	339.8	340.1	340.4	340.4	340.1	339.8	339.5	339.2
155°	350.7	351.1	351.5	351.6	351.3	351.1	350.9	350.6
157.5°	360.8	361.4	361.8	361.9	361.6	361.2	360.9	360.5
160°	366.8	367.3	367.8	367.8	367.5	367.2	366.9	366.6
162.5°	372.3	372.8	373.3	373.3	373.1	372.7	372.3	371.9
165°	379.3	379.8	380.3	380.4	380.0	379.7	379.3	379.0
167.5°	385.1	385.6	386.2	386.3	385.9	385.4	385.0	384.7
170°	388.3	388.8	389.4	389.4	389.0	388.5	388.0	387.6
172.5°	390.7	391.2	391.7	391.8	391.3	390.9	390.5	390.0
175°	393.3	393.8	394.4	394.4	394.0	393.5	393.0	392.6
177.5°	394.5	394.8	395.2	395.2	394.8	394.5	394.2	393.8
180°	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6

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