

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: P331425-830

Luminaire Tested: **SA2XXDIP-C1005D330U830-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331425-830
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-C1005D330U830-4F0-1E-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

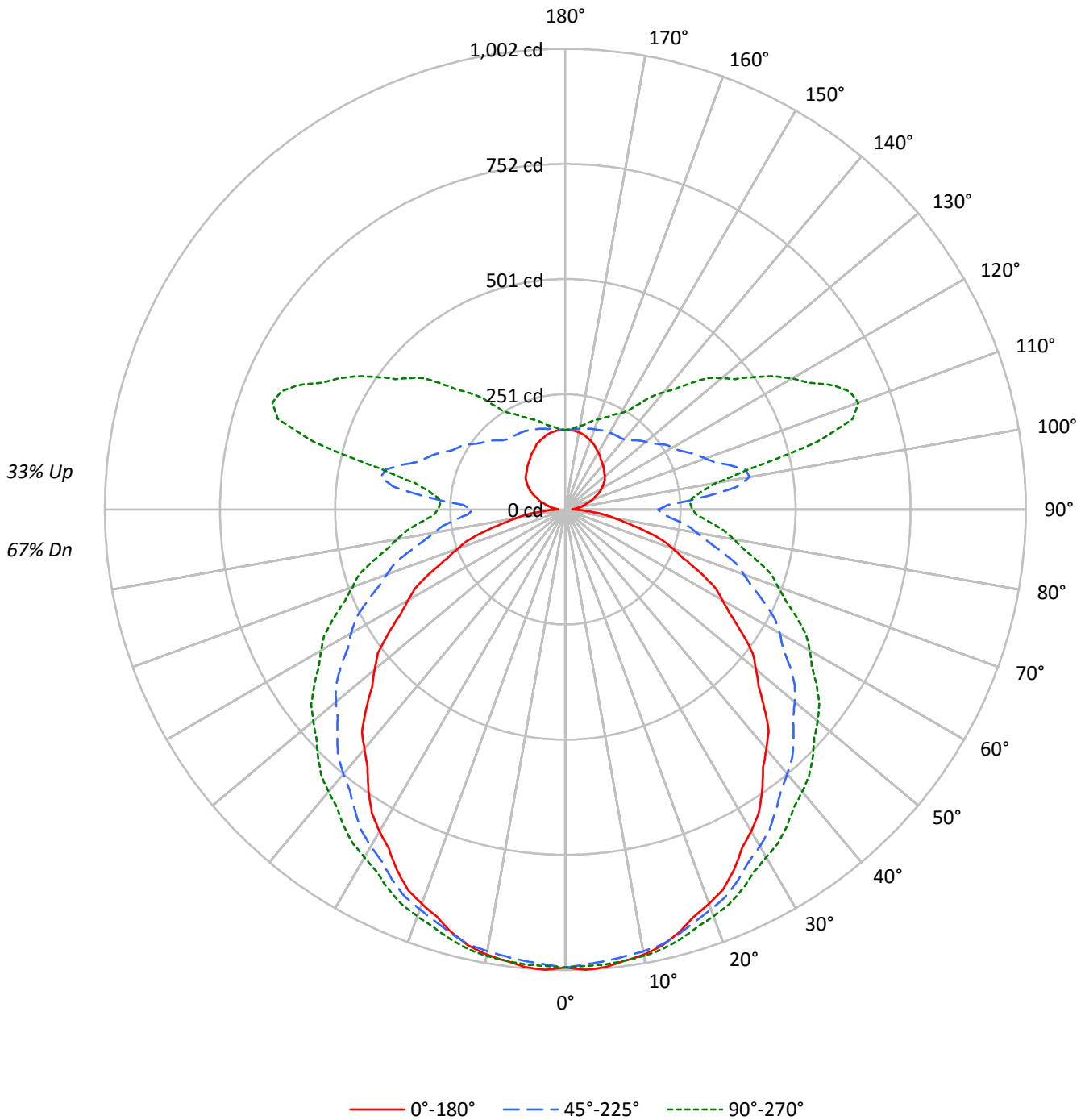
Lumens per Lamp: N/A
Luminaire Lumens: 5009.1 lumens
Efficiency: N/A
Efficacy: 100.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Direct

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	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°	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	5.4
20°-30°	410.4	8.2
30°-40°	499.9	10.0
40°-50°	537.8	10.7
50°-60°	522.2	10.4
60°-70°	456.0	9.1
70°-80°	351.0	7.0
80°-90°	237.2	4.7
90°-100°	231.6	4.6
100°-110°	353.5	7.1
110°-120°	327.9	6.5
120°-130°	249.2	5.0
130°-140°	183.3	3.7
140°-150°	127.9	2.6
150°-160°	87.6	1.7
160°-170°	51.6	1.0
170°-180°	16.8	0.3
0°-30°	775.7	15.5
0°-40°	1275.5	25.5
0°-60°	2335.5	46.6
0°-90°	3379.7	67.5
90°-120°	912.9	18.2
90°-150°	1473.4	29.4
90°-180°	1629.0	32.5
0°-180°	5009.1	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	10
95°	23	109	297	268	276	21
105°	48	112	371	614	566	51
115°	77	115	293	555	640	76
125°	103	124	248	432	502	92
135°	119	142	212	335	390	92
145°	134	154	195	251	281	84
155°	152	164	190	214	223	70
165°	166	171	182	192	196	47
175°	173	173	174	177	176	16
180°	173	173	173	173	173	



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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	67.1	86.3	105.7	125.6	146.6	167.6	188.5	209.2	222.2
90°	14.8	34.4	54.4	73.6	92.9	113.5	135.7	158.5	181.2	202.0	214.5
92.5°	17.3	36.5	56.2	75.0	94.6	116.3	143.6	174.0	203.2	223.6	229.4
95°	23.2	39.6	58.1	76.2	96.5	121.7	156.3	204.5	262.4	296.6	292.6
97.5°	29.1	44.3	61.3	79.2	98.8	123.8	161.5	220.4	303.0	376.5	399.4
100°	35.7	48.6	63.5	80.7	99.2	123.5	159.1	217.7	307.6	407.6	467.4
102.5°	40.7	52.3	66.2	82.4	100.1	123.6	157.4	210.9	295.0	400.8	487.8
105°	47.9	58.5	70.1	84.5	101.0	123.4	155.7	202.1	273.7	371.0	470.8
107.5°	57.1	65.7	75.4	87.5	102.2	123.2	154.4	196.2	257.7	340.3	429.3
110°	62.4	70.1	78.6	89.4	102.7	123.5	153.8	193.5	249.9	324.2	403.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	68.2	74.9	82.7	92.1	104.2	124.3	153.4	191.0	242.9	310.3	382.6
115°	77.4	82.6	88.1	95.7	105.8	123.8	152.6	187.3	234.0	293.1	355.4
117.5°	85.4	89.1	93.3	99.2	107.9	125.1	151.7	184.1	225.7	278.1	333.5
120°	91.2	93.9	97.2	101.4	109.3	125.7	151.6	182.4	220.9	269.4	320.7
122.5°	96.9	98.4	100.9	104.7	111.9	127.8	152.0	180.8	216.6	261.4	309.0
125°	102.8	103.8	105.8	109.8	116.4	130.9	153.2	178.4	209.3	247.6	290.6
127.5°	108.7	109.7	112.2	116.2	122.2	135.8	155.8	177.6	203.8	236.1	273.4
130°	112.2	113.1	116.1	120.5	126.9	139.4	157.8	177.1	200.6	228.6	262.3
132.5°	115.3	116.6	119.9	124.5	131.1	142.9	159.2	176.7	197.3	221.4	251.8
135°	118.7	120.0	124.0	129.0	136.7	147.6	161.5	176.3	192.8	212.1	237.8
137.5°	123.2	124.7	128.7	133.9	141.5	150.8	162.7	175.0	188.5	203.6	225.5
140°	126.7	127.7	131.4	136.4	143.4	152.2	162.8	173.8	185.8	198.7	218.2
142.5°	130.2	130.8	134.3	139.3	146.0	154.0	163.9	174.1	184.7	196.4	212.9
145°	133.8	135.3	138.6	143.5	150.2	157.5	166.5	175.9	185.1	195.1	207.7
147.5°	139.5	140.4	143.6	148.3	153.8	160.3	168.8	177.0	185.4	194.0	203.5
150°	143.2	144.2	146.8	151.2	156.2	162.2	169.8	177.5	185.1	193.1	201.1
152.5°	146.9	147.4	150.1	153.8	158.6	164.0	170.9	177.8	184.6	191.8	199.3
155°	152.2	152.5	154.5	158.2	161.8	166.8	172.5	178.1	183.8	189.5	195.9
157.5°	156.6	156.9	158.5	161.7	164.7	168.8	173.6	178.1	182.3	187.1	192.6
160°	159.5	159.9	161.2	163.8	166.5	170.2	174.2	178.1	181.5	185.5	190.1
162.5°	162.5	162.2	163.6	165.7	168.1	171.0	174.5	177.9	180.7	184.2	188.0
165°	165.9	165.5	166.2	168.1	169.8	171.8	174.8	177.2	179.2	181.5	184.5
167.5°	168.6	168.2	168.8	170.1	171.4	172.6	174.7	176.7	177.7	179.2	181.1
170°	170.5	169.8	170.2	171.2	171.8	172.9	174.5	176.2	176.8	177.9	179.2
172.5°	171.5	171.2	171.0	172.0	172.4	173.1	174.3	175.4	175.8	176.3	177.3
175°	172.9	172.5	172.2	172.9	172.9	173.1	173.8	174.5	174.2	174.5	174.8
177.5°	173.4	172.9	172.7	173.1	173.1	173.1	173.4	174.0	173.4	173.1	173.4
180°	173.1	173.1	173.1	173.1	173.1	173.1	173.1	173.1	173.1	173.1	173.1



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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°	235.2	248.2	261.4	270.0	274.2	278.2	282.4	286.4
90°	227.0	239.2	252.7	261.4	265.2	269.1	273.0	276.7
92.5°	234.5	242.9	252.7	258.8	262.5	265.2	269.4	272.7
95°	277.8	269.7	267.9	268.5	268.1	269.3	272.1	276.3
97.5°	381.1	355.9	331.8	315.6	303.4	299.0	297.9	298.9
100°	472.2	442.8	409.1	376.5	352.4	341.6	335.5	333.0
102.5°	529.4	531.8	510.0	474.9	448.4	427.4	419.0	414.3
105°	551.3	600.2	615.8	612.2	595.0	577.9	567.1	566.0
107.5°	513.5	581.0	626.4	649.7	655.8	658.3	658.9	656.2
110°	484.0	553.8	606.8	641.0	658.8	668.7	675.2	678.4



TEST NUMBER: P331425-830

CATALOG NUMBER: SA2XXDIP-C1005D330U830-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	456.2	523.7	579.5	617.7	641.1	655.3	664.5	669.8
115°	420.0	480.9	534.1	575.0	602.2	621.0	633.2	639.8
117.5°	389.6	444.1	493.2	531.8	559.1	578.6	591.0	596.8
120°	372.6	422.9	467.2	503.7	530.6	549.8	563.0	569.8
122.5°	358.0	404.5	446.7	479.9	503.9	522.3	533.9	539.7
125°	335.5	378.5	416.5	447.2	469.4	484.9	496.2	501.7
127.5°	313.4	352.4	388.0	416.4	436.1	450.8	460.8	465.8
130°	299.3	335.6	369.7	396.7	415.7	429.5	438.8	444.0
132.5°	285.4	319.4	351.0	376.6	395.3	409.2	417.9	422.8
135°	266.2	294.8	323.6	346.9	363.8	377.3	385.9	389.8
137.5°	249.0	273.2	296.6	316.9	332.2	343.8	351.3	355.4
140°	238.3	259.4	279.8	298.0	310.7	321.2	328.1	332.1
142.5°	230.2	247.9	265.1	280.3	292.1	301.6	307.7	309.8
145°	220.0	232.9	245.2	256.6	266.2	273.4	278.3	281.0
147.5°	212.5	221.5	229.8	237.4	244.8	250.1	253.1	254.5
150°	209.2	216.5	223.5	229.4	234.4	238.5	240.4	240.8
152.5°	206.2	213.0	219.0	224.1	228.1	231.5	233.0	233.1
155°	202.2	207.5	212.4	216.1	219.8	222.2	223.5	222.8
157.5°	197.5	201.9	206.0	209.0	211.5	213.5	214.1	214.1
160°	194.4	198.1	201.8	204.2	206.5	208.1	208.5	208.5
162.5°	191.5	194.7	197.8	199.6	202.0	203.1	203.4	203.1
165°	187.2	189.5	191.8	193.1	194.4	195.9	195.9	195.5
167.5°	182.9	184.7	186.3	187.6	188.1	188.9	188.8	188.4
170°	180.9	181.8	183.1	183.8	184.2	185.1	184.8	184.2
172.5°	178.4	179.2	180.2	180.6	181.0	181.4	181.1	180.7
175°	175.9	176.2	176.5	176.8	176.8	177.2	176.8	176.2
177.5°	174.0	174.0	174.3	174.3	174.3	174.3	174.0	173.4
180°	173.1	173.1	173.1	173.1	173.1	173.1	173.1	173.1

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