

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: P331261-830

Luminaire Tested: **SA2XXDIP-C290D725U830-4F0-1E-UDD-D**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331261-830
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-C290D725U830-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 290 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 725 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

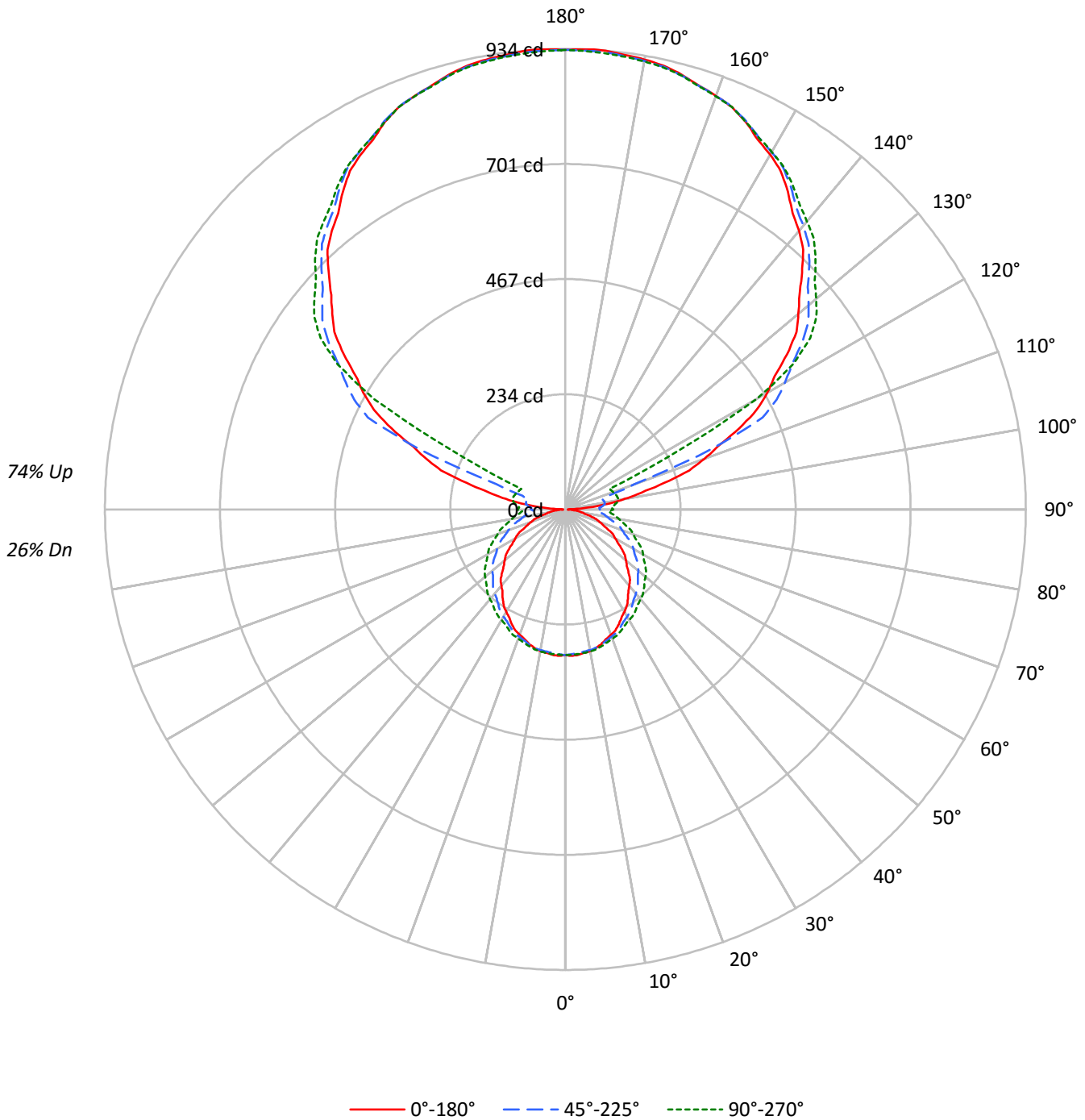
Lumens per Lamp: N/A
Luminaire Lumens: 3860.1 lumens
Efficiency: N/A
Efficacy: 123.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

Input Watts (W): 31.2
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	101	101	101	101	90	90	90	90	70	70	70	51	51	51	34	34	34	26
1	92	87	83	79	81	78	74	71	60	58	56	44	42	41	29	28	27	20
2	83	76	69	64	74	67	62	58	52	48	45	38	36	34	25	23	22	16
3	76	66	59	53	67	59	53	48	46	41	38	33	30	28	22	20	19	13
4	69	58	50	44	61	52	45	40	40	36	32	29	26	24	19	17	16	11
5	63	52	44	38	56	46	39	34	36	31	27	26	23	20	17	15	14	10
6	58	46	38	32	51	41	34	29	32	27	23	24	20	18	16	13	12	8
7	53	41	34	28	47	37	30	25	29	24	20	21	18	15	14	12	10	7
8	49	37	30	25	44	33	27	22	26	21	18	19	16	14	13	11	9	7
9	46	34	27	22	41	30	24	20	24	19	16	18	14	12	12	10	8	6
10	43	31	24	19	38	28	22	17	22	17	14	16	13	11	11	9	7	5

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4771	4771	4771
5°	4794	4593	4573
10°	4763	4457	4407
15°	4698	4312	4229
20°	4614	4159	4059
25°	4533	4009	3902
30°	4418	3857	3747
35°	4301	3711	3638
40°	4178	3584	3528
45°	4060	3473	3434
50°	3936	3371	3343
55°	3802	3261	3248
60°	3643	3149	3150
65°	3474	3016	3031
70°	3286	2872	2904
75°	3050	2735	2786
80°	2669	2592	2667
85°	2319	2468	2574



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	28.0	0.7
10°-20°	80.3	2.1
20°-30°	121.6	3.2
30°-40°	148.2	3.8
40°-50°	159.4	4.1
50°-60°	154.8	4.0
60°-70°	135.2	3.5
70°-80°	104.1	2.7
80°-90°	72.1	1.9
90°-100°	79.2	2.1
100°-110°	149.1	3.9
110°-120°	327.9	8.5
120°-130°	515.9	13.4
130°-140°	540.3	14.0
140°-150°	498.1	12.9
150°-160°	399.7	10.4
160°-170°	257.6	6.7
170°-180°	88.7	2.3
0°-30°	229.9	6.0
0°-40°	378.1	9.8
0°-60°	692.3	17.9
0°-90°	1003.7	26.0
90°-120°	556.2	14.4
90°-150°	2110.5	54.7
90°-180°	2856.0	74.0
0°-180°	3860.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	296	296	296	296	296	
5°	296	295	292	295	294	28
15°	283	283	283	287	287	80
25°	257	260	264	269	270	118
35°	221	229	237	246	249	138
45°	182	193	208	221	226	140
55°	139	155	177	192	198	124
65°	95	116	141	158	164	94
75°	53	77	104	122	128	56
85°	16	42	69	87	93	17
90°	5	37	70	90	97	5
95°	47	47	76	94	100	56
105°	207	229	78	99	108	221
115°	389	407	442	157	98	383
125°	549	559	584	600	606	489
135°	679	689	700	715	718	524
145°	787	787	798	804	804	492
155°	866	861	868	872	867	399
165°	913	909	911	915	911	258
175°	934	929	930	934	928	89
180°	932	932	932	932	932	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	295.5	295.5	295.5	295.5	295.5	295.5	295.5	295.5	295.5	295.5	295.5
2.5°	297.2	296.9	296.7	296.4	296.2	295.9	295.3	294.8	294.3	293.7	294.1
5°	296.3	296.1	295.8	295.5	295.1	294.7	294.2	293.6	293.0	292.5	293.0
7.5°	293.6	293.4	293.2	293.0	292.8	292.6	292.1	291.7	291.2	290.8	291.5
10°	291.6	291.4	291.2	291.1	290.9	290.6	290.3	290.0	289.7	289.5	290.2
12.5°	288.1	288.2	288.2	288.3	288.3	288.2	288.0	287.9	287.6	287.4	288.1
15°	282.6	282.8	283.0	283.1	283.3	283.4	283.4	283.4	283.4	283.4	284.3
17.5°	275.4	275.8	276.2	276.6	277.0	277.4	277.7	278.0	278.2	278.6	279.5
20°	270.6	271.1	271.5	272.0	272.5	273.0	273.3	273.7	274.1	274.5	275.5
22.5°	265.5	266.0	266.6	267.1	267.7	268.2	268.7	269.3	269.8	270.3	271.4
25°	256.9	257.6	258.3	258.9	259.6	260.3	261.2	262.0	262.9	263.7	264.9
27.5°	246.7	247.7	248.8	249.9	251.0	252.0	253.0	254.0	255.1	256.1	257.5
30°	239.8	241.0	242.2	243.5	244.7	246.0	247.2	248.5	249.7	250.9	252.4
32.5°	232.2	233.7	235.0	236.4	237.8	239.2	240.7	242.1	243.6	245.1	246.9
35°	221.4	223.0	224.6	226.2	227.8	229.5	231.4	233.2	235.0	236.8	238.8
37.5°	209.5	211.4	213.3	215.2	217.0	219.1	221.5	223.8	226.1	228.5	230.8
40°	201.7	203.8	205.9	207.9	210.0	212.4	214.9	217.5	220.1	222.6	225.1
42.5°	194.2	196.2	198.3	200.4	202.6	205.0	208.0	210.9	213.9	216.8	219.5
45°	181.5	184.1	186.7	189.3	191.8	194.7	198.1	201.4	204.7	208.1	211.0
47.5°	169.1	171.9	174.7	177.5	180.3	183.7	187.6	191.4	195.4	199.3	202.4
50°	160.6	163.5	166.5	169.4	172.4	176.0	180.3	184.5	188.8	193.1	196.3
52.5°	152.3	155.4	158.5	161.6	164.8	168.5	173.1	177.6	182.1	186.6	189.9
55°	139.1	142.6	146.0	149.4	152.9	157.0	162.0	166.9	171.9	176.8	180.3
57.5°	126.1	130.0	133.8	137.7	141.6	146.0	151.1	156.1	161.2	166.3	169.9
60°	116.9	121.0	125.1	129.1	133.3	138.0	143.5	148.8	154.3	159.7	163.3
62.5°	108.7	112.9	117.2	121.4	125.6	130.4	135.9	141.3	146.8	152.2	156.0
65°	95.0	99.7	104.3	109.1	113.7	118.9	124.4	130.1	135.7	141.3	145.2
67.5°	82.6	87.5	92.3	97.2	102.1	107.4	113.1	118.9	124.6	130.4	134.3
70°	73.6	78.6	83.5	88.5	93.4	98.9	104.7	110.7	116.6	122.4	126.6
72.5°	65.4	70.5	75.6	80.7	85.9	91.3	97.4	103.3	109.3	115.3	119.3
75°	52.7	58.0	63.3	68.6	74.0	79.6	85.8	91.9	97.9	104.1	108.1
77.5°	40.3	45.9	51.5	57.0	62.7	68.5	74.7	80.9	87.1	93.2	97.4
80°	32.1	37.9	43.7	49.5	55.3	61.4	67.5	73.7	79.8	86.1	90.0
82.5°	25.3	31.0	36.8	42.4	48.2	54.2	60.4	66.7	73.0	79.2	83.2
85°	15.5	21.3	27.2	33.1	39.0	45.0	51.1	57.2	63.2	69.4	73.3
87.5°	8.5	14.5	20.5	26.5	32.5	38.7	45.1	51.4	57.7	64.0	68.1
90°	5.0	12.2	19.3	26.5	33.6	40.8	48.2	55.4	62.7	70.0	74.6
92.5°	17.5	22.5	27.5	32.5	37.5	43.3	49.7	56.2	62.6	69.1	73.2
95°	47.2	46.8	46.3	45.8	45.3	48.5	55.2	62.0	68.8	75.5	79.9
97.5°	90.0	80.0	70.0	60.1	50.1	49.1	57.0	64.9	72.9	80.8	84.8
100°	122.3	105.4	88.3	71.4	54.3	49.8	57.6	65.5	73.3	81.2	86.0
102.5°	157.6	156.5	155.3	154.2	153.1	144.5	128.3	112.2	96.0	79.9	84.9
105°	207.1	214.3	221.6	228.8	236.1	221.8	185.8	149.9	114.0	77.9	82.9
107.5°	264.1	269.8	275.7	281.5	287.4	268.2	223.9	179.6	135.2	90.9	92.4
110°	300.4	305.5	310.5	315.6	320.6	303.8	265.1	226.5	187.8	149.2	137.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	334.9	339.3	343.7	348.1	352.4	351.5	345.3	339.0	332.7	326.5	274.8
115°	389.4	392.9	396.6	400.2	403.8	409.6	417.6	425.7	433.7	441.7	375.1
117.5°	437.6	441.2	444.7	448.3	451.8	456.9	463.4	469.9	476.5	483.0	469.0
120°	473.3	475.9	478.5	481.2	483.7	488.3	494.8	501.3	507.8	514.3	518.8
122.5°	503.4	506.0	508.5	511.0	513.5	518.0	524.5	531.1	537.6	544.1	547.8
125°	549.0	550.9	552.9	554.9	556.8	560.7	566.7	572.5	578.4	584.3	587.9
127.5°	590.7	592.8	594.8	596.8	598.9	602.3	606.8	611.4	616.0	620.6	624.4
130°	617.1	619.4	621.7	624.1	626.3	629.2	632.9	636.6	640.3	643.9	647.8
132.5°	644.0	646.0	648.0	649.9	651.9	654.4	657.6	660.8	664.0	667.1	670.8
135°	678.7	681.1	683.5	685.9	688.3	690.6	693.0	695.2	697.6	699.8	703.3
137.5°	714.2	715.9	717.5	719.2	720.8	722.6	724.5	726.5	728.5	730.4	733.6
140°	737.4	738.5	739.6	740.6	741.8	743.3	745.1	747.0	748.8	750.6	753.5
142.5°	756.8	757.8	758.7	759.7	760.7	762.1	764.1	766.0	768.0	769.9	772.3
145°	786.8	786.6	786.6	786.4	786.3	787.4	789.9	792.5	795.0	797.6	799.3
147.5°	813.4	812.8	812.3	811.7	811.2	812.1	814.6	817.1	819.6	822.2	823.0
150°	830.7	829.6	828.6	827.6	826.4	827.2	829.5	831.9	834.3	836.7	837.6
152.5°	845.2	844.0	842.9	841.7	840.6	841.1	843.4	845.6	847.9	850.2	851.1
155°	866.4	865.1	863.7	862.3	861.0	861.2	863.0	864.8	866.6	868.4	869.3
157.5°	883.0	881.8	880.7	879.6	878.4	878.4	879.8	881.0	882.2	883.5	884.6
160°	892.7	891.7	890.9	889.9	889.1	889.1	889.9	890.9	891.7	892.7	893.6
162.5°	901.4	900.4	899.6	898.6	897.7	897.7	898.4	899.2	900.0	900.8	901.8
165°	912.9	912.0	911.2	910.2	909.3	909.1	909.6	910.0	910.4	910.9	911.9
167.5°	921.5	920.7	919.7	918.9	917.9	917.7	918.1	918.5	919.0	919.4	920.4
170°	926.4	925.5	924.6	923.7	922.8	922.5	922.8	923.1	923.4	923.7	924.7
172.5°	929.6	928.7	927.8	926.9	926.0	925.8	926.0	926.3	926.6	926.9	928.0
175°	933.8	932.7	931.7	930.7	929.6	929.3	929.5	929.8	930.1	930.5	931.5
177.5°	934.5	933.7	932.8	932.0	931.1	930.8	930.9	931.0	931.1	931.2	932.1
180°	931.8	931.8	931.8	931.8	931.8	931.8	931.8	931.8	931.8	931.8	931.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	295.5	295.5	295.5	295.5	295.5	295.5	295.5	295.5
2.5°	294.5	294.8	295.2	295.4	295.2	295.0	294.9	294.7
5°	293.6	294.2	294.7	294.9	294.8	294.7	294.6	294.5
7.5°	292.2	292.8	293.6	293.9	293.8	293.7	293.6	293.5
10°	291.0	291.7	292.5	292.8	292.8	292.7	292.6	292.5
12.5°	288.9	289.6	290.4	290.8	290.7	290.6	290.5	290.4
15°	285.1	286.1	286.9	287.3	287.2	287.1	287.0	286.9
17.5°	280.4	281.3	282.1	282.6	282.6	282.6	282.6	282.6
20°	276.5	277.6	278.6	279.2	279.2	279.2	279.2	279.2
22.5°	272.5	273.5	274.6	275.1	275.3	275.4	275.6	275.8
25°	266.1	267.2	268.3	269.0	269.3	269.6	269.8	270.1
27.5°	258.9	260.4	261.8	262.7	262.9	263.1	263.3	263.5
30°	253.9	255.5	257.0	257.9	258.2	258.4	258.7	259.0
32.5°	248.5	250.3	252.1	253.3	253.7	254.3	254.8	255.2
35°	241.0	243.1	245.2	246.6	247.2	247.9	248.5	249.2
37.5°	233.1	235.4	237.8	239.3	240.0	240.7	241.4	242.0
40°	227.6	230.1	232.5	234.2	235.1	235.9	236.8	237.6
42.5°	222.3	224.9	227.6	229.4	230.3	231.1	232.0	232.8
45°	214.0	217.0	219.9	221.9	222.8	223.8	224.7	225.6
47.5°	205.5	208.5	211.6	213.7	214.7	215.7	216.8	217.8
50°	199.5	202.8	206.0	208.2	209.2	210.3	211.3	212.4
52.5°	193.2	196.5	199.8	202.1	203.2	204.3	205.5	206.5
55°	183.7	187.1	190.6	192.8	194.1	195.4	196.6	197.8
57.5°	173.6	177.3	181.0	183.4	184.7	186.0	187.2	188.5
60°	166.9	170.6	174.2	176.6	178.0	179.3	180.7	182.0
62.5°	159.9	163.7	167.6	170.1	171.4	172.6	173.9	175.1
65°	149.1	153.0	156.9	159.5	160.7	161.9	163.2	164.4
67.5°	138.2	142.1	146.1	148.7	150.0	151.3	152.6	153.9
70°	130.6	134.7	138.8	141.5	142.6	143.7	144.9	146.0
72.5°	123.3	127.3	131.3	134.0	135.3	136.8	138.2	139.5
75°	112.3	116.3	120.5	123.1	124.3	125.5	126.8	128.0
77.5°	101.4	105.5	109.5	112.3	113.6	114.9	116.2	117.5
80°	94.1	98.0	102.1	104.7	106.0	107.4	108.7	110.0
82.5°	87.2	91.2	95.2	97.8	99.1	100.4	101.6	102.8
85°	77.4	81.3	85.4	88.0	89.4	90.7	92.0	93.3
87.5°	72.1	76.1	80.1	82.8	84.1	85.4	86.6	87.9
90°	79.1	83.7	88.2	91.2	92.7	94.1	95.6	97.0
92.5°	77.3	81.4	85.6	88.3	89.6	91.0	92.3	93.6
95°	84.3	88.6	93.0	95.7	96.7	97.6	98.7	99.6
97.5°	89.0	93.1	97.3	99.9	101.2	102.5	103.9	105.2
100°	90.7	95.4	100.1	103.1	104.5	105.8	107.2	108.6
102.5°	89.9	94.9	99.9	103.2	104.6	106.1	107.5	109.1
105°	87.9	92.8	97.8	101.1	102.8	104.4	106.1	107.7
107.5°	94.0	95.5	97.0	98.6	100.2	101.9	103.5	105.1
110°	125.4	113.4	101.5	96.3	98.0	99.6	101.3	102.9



TEST NUMBER: P331261-830

CATALOG NUMBER: SA2XXDIP-C290D725U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	223.2	171.6	120.0	95.0	96.5	98.0	99.5	101.0
115°	308.7	242.1	175.6	137.5	127.7	118.0	108.3	98.5
117.5°	455.1	441.0	427.1	402.8	368.3	333.9	299.4	264.9
120°	523.3	527.7	532.2	524.8	505.7	486.4	467.3	448.1
122.5°	551.5	555.1	558.7	559.1	556.1	553.0	550.0	547.0
125°	591.5	595.1	598.8	601.2	602.6	603.8	605.1	606.4
127.5°	628.4	632.3	636.1	638.6	639.4	640.4	641.3	642.2
130°	651.8	655.6	659.6	661.9	662.5	663.1	663.7	664.3
132.5°	674.4	678.0	681.6	683.7	684.4	684.9	685.6	686.2
135°	706.8	710.3	713.8	715.8	716.2	716.7	717.2	717.7
137.5°	736.9	740.1	743.3	745.0	745.1	745.3	745.4	745.5
140°	756.4	759.2	762.0	763.5	763.3	763.1	762.9	762.7
142.5°	774.8	777.2	779.7	780.8	780.5	780.2	780.0	779.8
145°	800.9	802.5	804.1	804.7	804.5	804.2	804.0	803.7
147.5°	823.9	824.7	825.6	825.8	825.4	825.0	824.6	824.2
150°	838.5	839.4	840.3	840.4	839.6	838.9	838.1	837.4
152.5°	852.0	852.9	853.8	853.8	852.8	851.8	850.8	849.8
155°	870.2	871.1	872.0	871.9	870.6	869.5	868.3	867.0
157.5°	885.5	886.6	887.6	887.5	886.4	885.1	884.0	882.9
160°	894.5	895.4	896.3	896.2	895.1	894.1	893.1	892.0
162.5°	902.8	903.8	904.8	904.7	903.4	902.1	900.9	899.6
165°	912.9	914.1	915.1	915.1	914.1	912.9	911.9	910.9
167.5°	921.5	922.6	923.6	923.4	922.1	920.8	919.4	918.0
170°	925.8	926.8	927.9	927.7	926.4	925.0	923.7	922.4
172.5°	929.1	930.1	931.1	930.9	929.6	928.3	926.9	925.6
175°	932.6	933.6	934.6	934.4	932.9	931.4	929.9	928.4
177.5°	932.9	933.8	934.6	934.5	933.4	932.4	931.2	930.2
180°	931.8	931.8	931.8	931.8	931.8	931.8	931.8	931.8

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