

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: P331263-840

Luminaire Tested: **SA2XXDIP-C290D725U840-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331263-840
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-C290D725U840-4F0-1E-UDD-D4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 290 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 725 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4067.8 lumens
Efficiency: N/A
Efficacy: 130.4 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

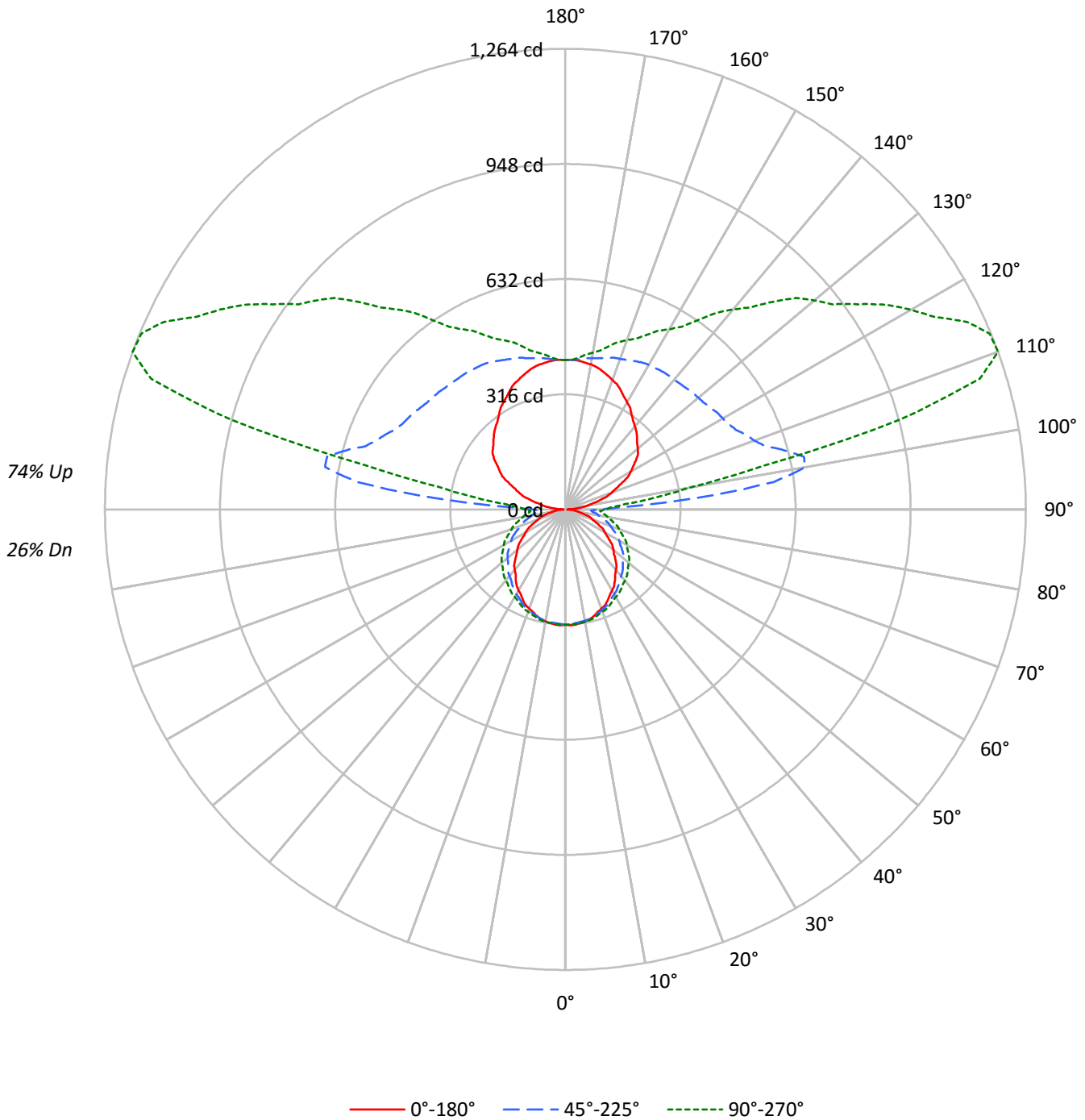
Input Watts (W): 31.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331263-840

CATALOG NUMBER: SA2XXDIP-C290D725U840-4F0-1E-UDD-D4

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	102	102	102	102	91	91	91	91	70	70	70	52	52	52	35	35	35	26
1	92	87	83	79	82	78	74	71	60	58	56	44	43	41	29	28	27	21
2	83	76	69	64	74	67	62	58	52	49	45	38	36	34	25	24	22	17
3	76	66	59	53	67	59	53	48	46	41	38	33	31	28	22	20	19	14
4	69	58	50	44	61	52	45	40	40	36	32	30	26	24	20	18	16	12
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	14	12	9
7	53	41	34	28	47	37	30	26	29	24	20	21	18	15	14	12	10	8
8	49	37	30	25	44	34	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	18	22	17	14	16	13	11	11	9	8	5

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5112	5112	5112
5°	5137	4921	4901
10°	5105	4774	4722
15°	5033	4621	4531
20°	4944	4456	4348
25°	4857	4297	4181
30°	4733	4133	4015
35°	4608	3975	3898
40°	4476	3840	3780
45°	4351	3721	3681
50°	4218	3612	3581
55°	4076	3496	3482
60°	3902	3373	3374
65°	3723	3232	3247
70°	3523	3079	3110
75°	3270	2929	2984
80°	2861	2776	2858
85°	2484	2642	2759



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.0	0.7
10°-20°	86.0	2.1
20°-30°	130.3	3.2
30°-40°	158.8	3.9
40°-50°	170.8	4.2
50°-60°	165.9	4.1
60°-70°	144.8	3.6
70°-80°	111.5	2.7
80°-90°	78.5	1.9
90°-100°	215.7	5.3
100°-110°	594.6	14.6
110°-120°	616.6	15.2
120°-130°	501.0	12.3
130°-140°	397.0	9.8
140°-150°	296.6	7.3
150°-160°	207.7	5.1
160°-170°	122.3	3.0
170°-180°	39.8	1.0
0°-30°	246.3	6.1
0°-40°	405.1	10.0
0°-60°	741.7	18.2
0°-90°	1076.6	26.5
90°-120°	1426.9	35.1
90°-150°	2621.4	64.4
90°-180°	2991.0	73.5
0°-180°	4067.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	317	317	317	317	317	
5°	318	316	313	316	316	30
15°	303	304	304	308	307	85
25°	275	278	283	288	289	127
35°	237	245	254	263	267	148
45°	194	207	223	237	242	150
55°	149	166	190	205	212	133
65°	102	125	151	170	176	101
75°	56	82	112	130	137	60
85°	17	45	74	93	100	18
90°	5	42	87	104	110	5
95°	31	93	362	186	166	32
105°	99	161	624	1100	950	105
115°	172	222	517	1051	1217	170
125°	238	282	486	846	982	211
135°	278	332	470	702	805	215
145°	317	365	463	577	633	199
155°	361	390	449	508	528	166
165°	393	405	430	456	463	111
175°	410	410	414	419	418	39
180°	410	410	410	410	410	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	316.6	316.6	316.6	316.6	316.6	316.6	316.6	316.6	316.6	316.6	316.6
2.5°	318.4	318.1	317.9	317.6	317.4	317.0	316.4	315.9	315.3	314.7	315.1
5°	317.5	317.2	316.9	316.6	316.2	315.8	315.2	314.6	314.0	313.4	314.0
7.5°	314.6	314.4	314.2	314.0	313.8	313.5	313.0	312.6	312.0	311.5	312.4
10°	312.5	312.3	312.0	311.8	311.6	311.3	311.0	310.7	310.4	310.1	310.9
12.5°	308.7	308.8	308.8	308.9	308.9	308.8	308.6	308.4	308.1	307.9	308.7
15°	302.8	303.0	303.2	303.4	303.6	303.7	303.7	303.7	303.7	303.7	304.6
17.5°	295.1	295.5	295.9	296.4	296.8	297.2	297.5	297.8	298.1	298.5	299.4
20°	289.9	290.4	290.9	291.4	292.0	292.5	292.9	293.3	293.7	294.1	295.2
22.5°	284.5	285.0	285.6	286.2	286.8	287.4	287.9	288.5	289.1	289.6	290.7
25°	275.3	276.0	276.7	277.4	278.1	278.9	279.8	280.7	281.7	282.6	283.8
27.5°	264.3	265.4	266.6	267.7	268.9	270.0	271.0	272.2	273.3	274.4	275.9
30°	256.9	258.2	259.5	260.8	262.2	263.6	264.9	266.2	267.5	268.8	270.4
32.5°	248.8	250.3	251.8	253.3	254.8	256.3	257.9	259.4	261.1	262.6	264.5
35°	237.2	238.9	240.7	242.4	244.1	245.9	247.9	249.8	251.8	253.7	255.9
37.5°	224.5	226.5	228.5	230.6	232.5	234.8	237.3	239.7	242.3	244.8	247.3
40°	216.1	218.3	220.6	222.8	225.0	227.5	230.2	233.1	235.8	238.5	241.2
42.5°	208.0	210.3	212.5	214.7	217.0	219.6	222.9	226.0	229.1	232.3	235.2
45°	194.5	197.2	200.1	202.8	205.5	208.6	212.3	215.8	219.3	223.0	226.1
47.5°	181.2	184.2	187.2	190.2	193.2	196.8	201.0	205.1	209.3	213.5	216.8
50°	172.1	175.2	178.3	181.5	184.7	188.5	193.2	197.7	202.3	206.9	210.4
52.5°	163.2	166.5	169.9	173.2	176.5	180.6	185.4	190.3	195.1	200.0	203.5
55°	149.1	152.8	156.4	160.1	163.8	168.2	173.6	178.8	184.2	189.5	193.2
57.5°	135.1	139.3	143.4	147.5	151.7	156.4	161.9	167.2	172.7	178.1	182.1
60°	125.2	129.7	134.0	138.4	142.8	147.8	153.7	159.5	165.3	171.1	175.0
62.5°	116.4	121.0	125.5	130.1	134.6	139.8	145.6	151.4	157.2	163.1	167.1
65°	101.8	106.8	111.8	116.8	121.8	127.3	133.3	139.4	145.4	151.4	155.6
67.5°	88.5	93.7	98.9	104.1	109.4	115.0	121.2	127.3	133.5	139.7	143.9
70°	78.9	84.2	89.5	94.8	100.1	105.9	112.2	118.6	124.9	131.2	135.6
72.5°	70.1	75.5	81.0	86.4	92.0	97.9	104.3	110.7	117.1	123.5	127.8
75°	56.5	62.1	67.9	73.5	79.3	85.3	91.9	98.5	104.9	111.5	115.8
77.5°	43.2	49.2	55.1	61.1	67.2	73.4	80.1	86.6	93.3	99.9	104.3
80°	34.4	40.6	46.9	53.0	59.3	65.7	72.3	79.0	85.5	92.2	96.4
82.5°	27.1	33.2	39.4	45.4	51.6	58.1	64.7	71.5	78.2	84.8	89.2
85°	16.6	22.8	29.2	35.4	41.8	48.2	54.7	61.3	67.8	74.3	78.6
87.5°	9.2	15.7	22.4	28.8	35.1	42.0	49.3	57.0	64.4	71.1	75.0
90°	5.4	13.6	22.7	30.2	37.7	46.3	56.8	68.8	80.1	87.4	90.7
92.5°	13.8	23.6	34.8	43.8	54.6	68.0	92.1	123.5	152.2	159.9	147.9
95°	31.3	39.3	51.9	63.8	81.3	105.6	148.0	222.9	320.5	362.2	327.4
97.5°	48.2	56.8	69.4	84.3	103.1	129.7	181.2	282.8	440.8	577.0	606.7
100°	64.0	70.2	81.0	97.5	116.9	143.8	191.4	293.4	469.6	669.5	787.0
102.5°	78.2	83.3	93.9	110.0	129.9	156.4	200.7	291.8	455.2	670.1	852.5
105°	98.6	104.7	113.2	127.9	148.3	174.5	216.9	292.6	428.1	624.4	838.0
107.5°	121.3	126.1	133.9	147.1	166.7	192.7	233.8	300.1	412.8	575.8	764.8
110°	136.0	141.3	148.0	160.3	178.9	205.3	245.1	306.9	408.2	552.1	718.8



TEST NUMBER: P331263-840

CATALOG NUMBER: SA2XXDIP-C290D725U840-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	150.0	154.8	161.9	173.2	190.9	217.6	255.9	314.3	406.5	535.6	685.9
115°	171.6	176.6	182.5	193.1	210.0	234.2	272.7	325.5	406.6	516.9	644.7
117.5°	193.5	197.4	202.9	212.0	227.8	252.5	288.1	337.5	408.9	505.7	617.2
120°	207.4	211.0	216.1	223.7	239.8	264.2	299.0	345.8	410.6	499.2	602.3
122.5°	220.7	223.4	228.2	236.2	252.2	276.8	309.5	352.8	413.0	494.4	589.3
125°	237.7	240.1	244.9	254.3	270.1	293.9	325.5	364.4	416.5	486.0	570.2
127.5°	251.7	254.7	261.3	271.6	286.6	310.6	340.8	375.4	420.6	480.1	552.4
130°	259.8	262.9	270.6	281.7	297.3	320.4	350.2	382.3	423.9	476.7	540.7
132.5°	267.4	271.1	279.5	291.1	307.4	330.3	358.3	389.3	427.3	473.8	530.8
135°	278.3	281.4	290.9	302.8	320.9	343.6	369.8	398.5	431.1	470.0	517.2
137.5°	289.0	292.9	302.3	314.9	332.9	353.7	379.0	405.2	434.3	467.2	506.9
140°	297.3	300.3	309.7	322.2	339.5	360.1	384.0	408.6	435.7	465.0	500.7
142.5°	305.5	307.9	316.7	329.2	345.8	365.1	388.1	412.0	437.0	464.3	495.1
145°	317.3	320.5	328.4	340.2	356.0	373.3	394.8	416.8	438.9	462.6	488.5
147.5°	330.6	333.0	340.5	351.4	364.6	380.0	400.1	419.5	439.6	459.8	481.9
150°	339.4	341.8	348.1	358.4	370.2	384.5	402.6	420.7	438.9	457.9	476.8
152.5°	348.3	349.4	355.7	364.7	375.9	388.9	405.2	421.4	437.7	454.7	472.4
155°	360.7	361.5	366.3	375.0	383.6	395.5	408.9	422.3	435.8	449.2	464.1
157.5°	371.2	371.9	375.8	383.3	390.3	400.2	411.6	422.3	432.1	443.5	456.5
160°	378.1	378.9	382.0	388.4	394.8	403.3	412.8	422.3	430.2	439.7	450.8
162.5°	385.1	384.6	387.8	392.8	398.5	405.3	413.5	421.7	428.4	436.6	445.7
165°	393.1	392.3	393.9	398.7	402.6	407.4	414.4	420.0	424.7	430.2	437.4
167.5°	399.8	398.8	400.2	403.2	406.1	409.1	414.2	418.9	421.1	424.7	429.1
170°	404.1	402.6	403.3	405.8	407.4	409.7	413.6	417.6	419.2	421.5	424.7
172.5°	406.7	405.8	405.3	407.7	408.6	410.3	413.0	415.7	416.7	417.8	420.3
175°	409.7	408.9	408.1	409.7	409.7	410.5	412.0	413.6	412.8	413.6	414.4
177.5°	411.1	409.9	409.2	410.5	410.5	410.5	411.1	412.4	411.1	410.5	411.1
180°	410.5	410.5	410.5	410.5	410.5	410.5	410.5	410.5	410.5	410.5	410.5



TEST NUMBER: P331263-840

CATALOG NUMBER: SA2XXDIP-C290D725U840-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	316.6	316.6	316.6	316.6	316.6	316.6	316.6	316.6
2.5°	315.5	315.9	316.3	316.5	316.3	316.1	316.0	315.8
5°	314.6	315.2	315.8	316.0	315.9	315.8	315.7	315.6
7.5°	313.1	313.8	314.6	314.9	314.8	314.7	314.6	314.5
10°	311.7	312.6	313.4	313.8	313.7	313.6	313.5	313.4
12.5°	309.5	310.3	311.1	311.5	311.4	311.3	311.2	311.1
15°	305.5	306.5	307.4	307.8	307.7	307.6	307.5	307.4
17.5°	300.4	301.3	302.3	302.8	302.8	302.8	302.8	302.8
20°	296.3	297.4	298.5	299.1	299.1	299.1	299.1	299.1
22.5°	292.0	293.1	294.2	294.8	295.0	295.1	295.3	295.5
25°	285.1	286.3	287.5	288.2	288.5	288.8	289.1	289.4
27.5°	277.4	279.0	280.5	281.4	281.7	281.9	282.1	282.4
30°	272.1	273.8	275.4	276.3	276.6	276.9	277.2	277.5
32.5°	266.3	268.2	270.1	271.4	271.9	272.5	273.0	273.5
35°	258.2	260.4	262.7	264.2	264.9	265.6	266.3	267.0
37.5°	249.7	252.3	254.8	256.4	257.1	257.9	258.6	259.3
40°	243.9	246.5	249.1	251.0	251.9	252.8	253.7	254.6
42.5°	238.1	241.0	243.9	245.8	246.7	247.6	248.5	249.4
45°	229.2	232.5	235.6	237.7	238.7	239.7	240.8	241.8
47.5°	220.2	223.4	226.7	228.9	230.0	231.2	232.3	233.4
50°	213.8	217.3	220.8	223.1	224.2	225.3	226.4	227.5
52.5°	207.0	210.6	214.1	216.5	217.7	218.9	220.2	221.3
55°	196.8	200.5	204.2	206.6	207.9	209.3	210.7	212.0
57.5°	186.0	190.0	193.9	196.5	197.9	199.2	200.6	202.0
60°	178.8	182.8	186.6	189.2	190.7	192.1	193.6	195.0
62.5°	171.3	175.4	179.6	182.3	183.6	184.9	186.3	187.6
65°	159.8	163.9	168.1	170.9	172.2	173.5	174.8	176.1
67.5°	148.0	152.3	156.5	159.4	160.7	162.1	163.5	164.9
70°	140.0	144.3	148.8	151.6	152.8	154.0	155.2	156.4
72.5°	132.1	136.4	140.7	143.6	145.0	146.5	148.0	149.5
75°	120.3	124.6	129.1	131.9	133.2	134.5	135.8	137.1
77.5°	108.7	113.0	117.3	120.3	121.7	123.1	124.5	125.9
80°	100.8	105.0	109.4	112.2	113.6	115.0	116.4	117.9
82.5°	93.4	97.8	102.0	104.8	106.1	107.6	108.9	110.2
85°	82.9	87.2	91.5	94.3	95.7	97.1	98.6	100.0
87.5°	79.1	82.9	87.4	90.3	91.6	92.9	94.2	95.5
90°	94.0	96.4	102.1	105.5	106.7	108.1	109.3	110.5
92.5°	134.1	128.3	125.6	123.4	124.0	122.7	124.5	124.5
95°	267.3	223.1	193.8	178.9	170.0	164.8	163.7	165.7
97.5°	539.0	454.9	373.3	318.8	282.4	264.1	253.8	248.3
100°	774.2	680.0	575.6	482.6	418.2	385.4	363.6	350.5
102.5°	927.5	909.0	833.5	734.8	664.7	607.8	580.5	562.3
105°	1005.7	1098.5	1112.4	1088.6	1040.8	993.0	960.2	950.2
107.5°	942.3	1080.1	1165.6	1206.1	1213.4	1211.8	1206.2	1192.5
110°	888.7	1033.2	1137.5	1204.5	1239.5	1255.7	1263.8	1264.1



TEST NUMBER: P331263-840

CATALOG NUMBER: SA2XXDIP-C290D725U840-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	839.3	978.3	1089.4	1165.9	1214.2	1240.4	1255.0	1260.3
115°	778.1	902.7	1009.2	1092.6	1149.7	1187.2	1208.8	1217.0
117.5°	730.9	840.7	937.5	1015.8	1074.0	1113.4	1136.1	1143.1
120°	706.9	807.7	894.2	968.1	1024.4	1062.7	1086.7	1095.7
122.5°	687.5	780.0	862.0	928.8	979.3	1016.7	1038.0	1045.6
125°	658.9	743.1	815.3	876.3	923.0	953.9	974.5	981.8
127.5°	630.8	706.8	774.9	831.2	872.0	901.1	919.0	924.9
130°	612.6	682.9	747.7	801.4	840.9	868.6	885.2	892.3
132.5°	595.0	660.2	719.9	770.4	809.3	837.0	852.3	858.8
135°	570.6	624.8	679.1	724.8	759.5	786.4	801.4	805.4
137.5°	550.5	595.9	639.2	679.0	710.6	733.8	746.9	752.3
140°	537.9	577.3	615.3	651.2	677.0	698.1	710.6	716.0
142.5°	527.6	561.1	593.7	623.6	648.1	667.3	678.4	679.9
145°	513.5	540.2	565.3	588.8	608.2	622.2	630.6	633.4
147.5°	502.8	523.5	542.7	559.6	575.4	586.4	592.0	593.7
150°	495.7	513.1	529.7	543.9	555.7	565.2	570.0	570.8
152.5°	488.8	504.9	519.0	531.3	540.6	548.8	552.3	552.4
155°	479.2	491.8	503.6	512.3	521.0	526.5	529.7	528.2
157.5°	468.0	478.6	488.5	495.2	501.4	506.0	507.5	507.5
160°	461.0	469.7	478.4	483.9	489.5	493.4	494.1	494.1
162.5°	454.0	461.5	468.9	473.2	478.7	481.4	482.2	481.5
165°	443.6	449.2	454.7	457.9	461.0	464.1	464.1	463.4
167.5°	433.7	438.0	441.7	444.6	446.1	447.8	447.6	446.7
170°	428.7	431.0	434.1	435.8	436.6	438.9	438.1	436.6
172.5°	422.9	424.7	427.3	428.2	429.0	430.1	429.3	428.4
175°	416.8	417.6	418.4	419.2	419.2	420.0	419.2	417.6
177.5°	412.4	412.4	413.0	413.0	413.0	413.0	412.4	411.1
180°	410.5	410.5	410.5	410.5	410.5	410.5	410.5	410.5

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