

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: P331933-840

Luminaire Tested: **S123DIP-S560D805U840-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331933-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S560D805U840-4F0-1E-UDD-D4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 805 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5323.8 lumens
Efficiency: N/A
Efficacy: 138.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: General Diffuse

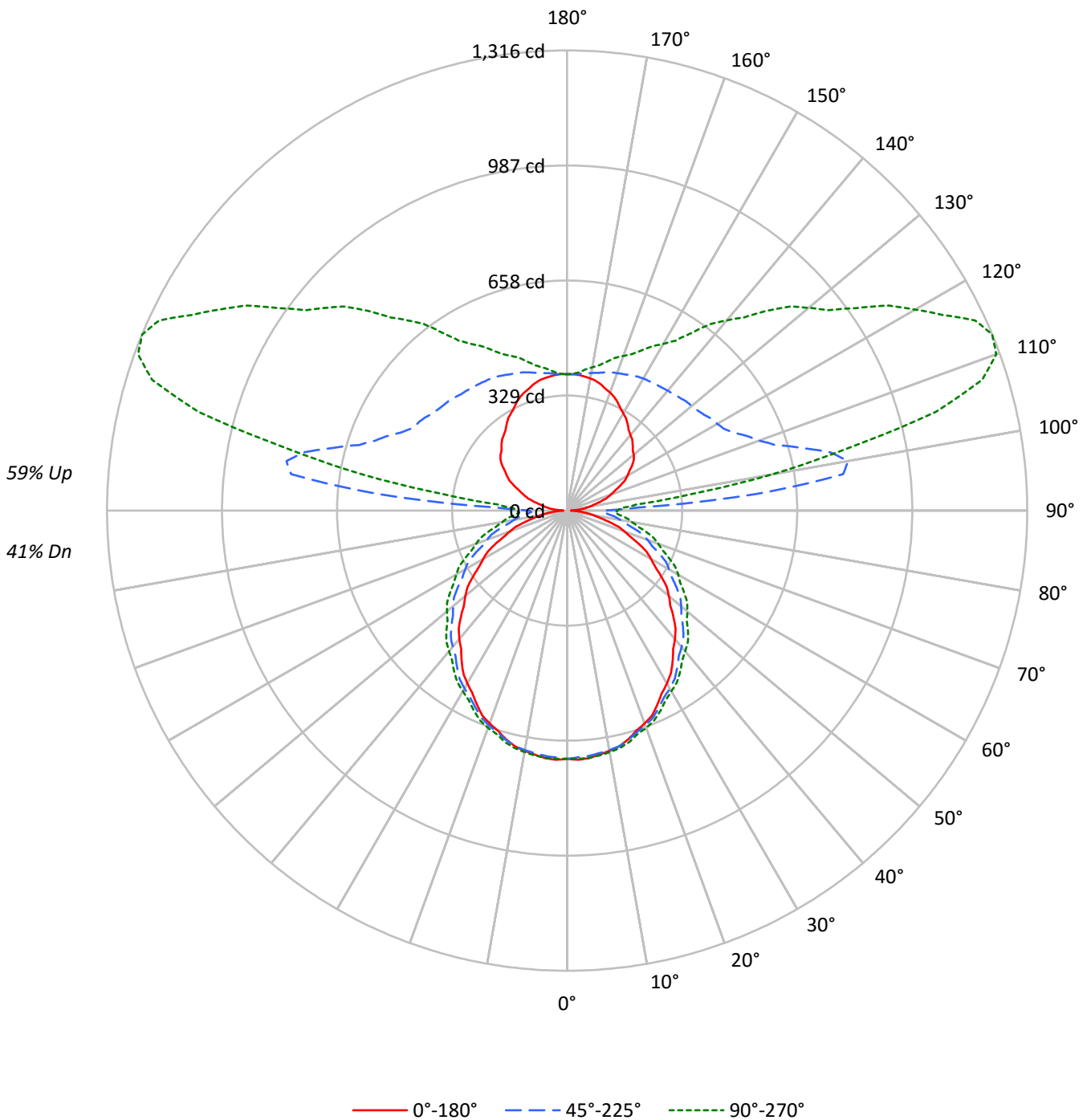
Input Watts (W): 38.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331933-840

CATALOG NUMBER: S123DIP-S560D805U840-4F0-1E-UDD-D4

Luminous Intensity Polar Plot





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CATALOG NUMBER: S123DIP-S560D805U840-4F0-1E-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	105	105	105	105	96	96	96	96	78	78	78		63	63	63		48	48	48	41
1	95	90	86	82	86	82	79	75	67	65	62		54	52	50		41	40	39	33
2	86	78	72	67	78	71	66	61	59	54	51		47	44	41		36	34	32	27
3	78	69	61	55	71	63	56	51	51	46	42		41	37	35		31	29	27	22
4	71	60	52	46	65	55	48	43	45	40	36		36	32	29		28	25	23	19
5	65	54	45	39	59	49	42	36	40	35	31		32	28	25		25	22	20	16
6	60	48	40	34	55	44	37	31	36	31	27		29	25	22		23	20	17	14
7	56	43	35	30	50	40	33	27	33	27	23		26	22	19		21	18	15	13
8	51	39	31	26	47	36	29	24	30	24	21		24	20	17		19	16	14	11
9	48	36	28	23	43	33	26	21	27	22	18		22	18	15		17	14	12	10
10	45	33	25	21	41	30	24	19	25	20	16		20	17	14		16	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7643	7643	7643
5°	7667	7451	7455
10°	7599	7280	7244
15°	7501	7084	7012
20°	7361	6862	6756
25°	7189	6606	6489
30°	7011	6375	6216
35°	6812	6132	6000
40°	6623	5910	5767
45°	6414	5697	5582
50°	6206	5488	5378
55°	5978	5271	5194
60°	5753	5053	5005
65°	5525	4819	4780
70°	5183	4558	4549
75°	4746	4256	4316
80°	4241	3962	4047
85°	3780	3757	3892



TEST NUMBER: P331933-840

CATALOG NUMBER: S123DIP-S560D805U840-4F0-1E-UDD-D4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.3	1.3
10°-20°	191.9	3.6
20°-30°	287.0	5.4
30°-40°	342.8	6.4
40°-50°	358.6	6.7
50°-60°	336.5	6.3
60°-70°	281.1	5.3
70°-80°	201.1	3.8
80°-90°	122.9	2.3
90°-100°	292.3	5.5
100°-110°	669.9	12.6
110°-120°	641.5	12.1
120°-130°	503.4	9.5
130°-140°	389.7	7.3
140°-150°	285.8	5.4
150°-160°	197.8	3.7
160°-170°	116.2	2.2
170°-180°	37.8	0.7
0°-30°	546.3	10.3
0°-40°	889.0	16.7
0°-60°	1584.2	29.8
0°-90°	2189.3	41.1
90°-120°	1603.7	30.1
90°-150°	2782.6	52.3
90°-180°	3134.0	58.9
0°-180°	5323.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	710	710	710	710	710	
5°	711	709	705	710	710	67
15°	677	679	678	686	685	191
25°	611	619	621	631	631	282
35°	526	538	548	560	563	329
45°	430	449	468	482	489	332
55°	328	354	381	401	408	294
65°	227	257	291	313	322	224
75°	123	160	198	223	233	131
85°	38	77	118	143	152	40
90°	12	58	107	135	144	9
95°	35	126	545	236	200	36
105°	98	161	693	1189	1091	104
115°	166	216	526	1124	1287	164
125°	227	269	478	862	1010	202
135°	265	316	456	699	808	205
145°	302	345	441	561	620	189
155°	342	369	427	486	506	157
165°	373	384	409	434	441	105
175°	389	390	392	398	397	37
180°	390	390	390	390	390	



TEST NUMBER: P331933-840

CATALOG NUMBER: S123DIP-S560D805U840-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	710.1	710.1	710.1	710.1	710.1	710.1	710.1	710.1	710.1	710.1	710.1
2.5°	713.3	712.9	712.5	712.0	711.6	710.8	709.7	708.6	707.5	706.4	707.5
5°	710.9	710.5	710.2	709.9	709.5	708.8	707.8	706.8	705.8	704.7	706.1
7.5°	704.0	704.0	704.1	704.2	704.3	703.8	702.8	701.8	700.7	699.7	701.5
10°	697.8	698.1	698.4	698.8	699.1	698.9	698.0	697.2	696.3	695.5	697.2
12.5°	690.3	690.8	691.4	691.8	692.3	692.3	691.7	691.1	690.4	689.8	691.5
15°	676.9	677.4	677.9	678.4	678.9	679.1	678.9	678.7	678.6	678.4	680.1
17.5°	659.8	660.9	662.0	663.0	664.0	664.5	664.4	664.3	664.3	664.2	665.7
20°	647.5	648.5	649.5	650.6	651.6	652.3	652.7	653.0	653.3	653.7	655.2
22.5°	634.5	635.5	636.5	637.6	638.6	639.3	639.9	640.4	640.9	641.3	643.3
25°	611.2	612.9	614.6	616.3	618.0	619.1	619.7	620.2	620.7	621.2	623.4
27.5°	587.6	589.6	591.6	593.5	595.4	596.9	598.0	599.2	600.3	601.4	603.3
30°	570.9	573.1	575.3	577.6	579.9	581.7	583.0	584.4	585.7	587.1	589.3
32.5°	552.3	554.8	557.3	559.9	562.4	564.5	566.3	568.0	569.9	571.7	573.9
35°	526.0	528.8	531.5	534.3	537.0	539.6	541.8	544.0	546.2	548.5	551.1
37.5°	498.2	501.3	504.3	507.5	510.6	513.5	516.2	519.0	521.7	524.5	527.5
40°	479.6	482.7	485.8	488.9	492.0	495.2	498.7	502.1	505.5	509.0	511.9
42.5°	459.2	463.0	466.8	470.5	474.3	478.0	481.6	485.1	488.8	492.3	495.5
45°	430.1	434.2	438.4	442.5	446.6	450.8	455.1	459.4	463.7	468.0	471.3
47.5°	399.6	404.3	409.0	413.6	418.3	423.1	428.1	432.9	437.9	442.8	446.5
50°	379.8	384.7	389.4	394.3	399.1	404.1	409.5	414.9	420.1	425.5	429.4
52.5°	358.8	363.9	369.0	374.1	379.1	384.7	390.5	396.4	402.2	408.2	412.2
55°	328.0	333.7	339.3	345.0	350.7	356.6	362.8	369.0	375.2	381.3	386.0
57.5°	298.0	303.9	309.8	315.7	321.6	328.0	334.8	341.5	348.3	355.1	359.7
60°	276.9	283.2	289.3	295.5	301.6	308.3	315.4	322.4	329.4	336.5	341.3
62.5°	257.1	263.5	269.8	276.1	282.5	289.3	296.8	304.3	311.7	319.2	324.0
65°	226.6	233.4	240.0	246.8	253.5	260.6	268.2	275.7	283.3	290.8	296.0
67.5°	195.7	202.9	210.0	217.0	224.2	231.6	239.3	247.0	254.7	262.4	268.0
70°	174.1	181.5	188.8	196.2	203.6	211.5	219.6	227.9	236.2	244.5	249.9
72.5°	154.2	161.7	169.1	176.4	183.8	191.8	200.3	208.8	217.3	225.9	231.6
75°	123.0	131.1	139.2	147.2	155.3	163.7	172.3	180.9	189.5	198.0	203.7
77.5°	95.7	103.9	112.1	120.2	128.4	136.7	145.4	154.1	162.8	171.5	177.4
80°	76.5	85.0	93.4	101.9	110.3	119.0	127.8	136.8	145.8	154.7	160.6
82.5°	59.9	68.5	77.0	85.5	94.1	102.9	112.0	121.1	130.2	139.3	145.1
85°	37.9	46.5	55.1	63.7	72.3	81.1	90.3	99.4	108.5	117.5	123.4
87.5°	20.9	29.8	38.7	47.7	56.6	65.5	74.7	84.0	93.2	102.5	108.2
90°	11.6	21.6	31.6	42.4	52.4	62.6	73.7	84.9	96.0	107.1	112.2
92.5°	19.2	31.6	45.7	59.6	73.8	93.6	122.9	165.5	207.4	203.9	179.8
95°	35.3	44.4	59.8	80.0	107.1	145.5	221.1	347.1	485.0	544.8	461.7
97.5°	53.4	60.2	73.0	90.8	117.0	157.4	229.5	370.2	594.2	796.6	852.4
100°	65.3	71.7	82.7	99.3	123.7	161.2	224.4	349.1	564.7	815.0	975.5
102.5°	78.1	84.4	94.2	109.7	131.6	166.2	223.6	330.5	523.2	770.2	978.0
105°	97.8	104.3	113.1	126.7	145.8	176.1	226.1	314.9	471.4	692.8	924.2
107.5°	118.1	123.9	132.0	144.8	162.4	190.4	234.8	309.4	436.8	623.9	834.2
110°	132.6	138.0	145.0	156.8	173.4	200.5	242.9	309.7	422.4	584.8	778.0



TEST NUMBER: P331933-840

CATALOG NUMBER: S123DIP-S560D805U840-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	146.4	151.4	157.8	169.1	185.0	211.1	250.6	312.9	412.6	557.1	728.0
115°	165.7	171.0	177.7	187.7	203.2	228.6	264.8	319.2	405.9	526.5	667.3
117.5°	185.6	190.6	195.7	204.3	220.6	243.9	279.3	328.1	402.2	505.9	628.2
120°	198.9	202.2	206.9	215.7	231.6	254.6	288.6	335.4	401.8	495.9	607.2
122.5°	210.9	213.7	218.1	227.1	241.9	265.8	299.0	342.3	403.4	488.5	589.6
125°	227.3	228.9	233.7	242.4	257.3	281.1	313.8	353.5	405.9	478.0	566.0
127.5°	240.4	242.7	248.3	257.0	273.4	296.7	327.5	362.8	409.6	470.5	544.7
130°	248.6	250.9	257.8	267.1	283.5	306.5	336.0	369.4	412.3	465.4	532.7
132.5°	254.4	257.3	265.0	276.4	292.9	315.0	343.2	375.3	413.6	461.7	521.3
135°	265.3	268.2	276.7	288.4	304.9	327.0	353.4	382.1	415.6	456.2	505.8
137.5°	275.5	278.7	287.1	299.6	315.9	336.1	360.6	387.3	416.5	450.7	492.4
140°	281.9	285.8	293.7	306.3	322.1	342.1	365.6	389.7	417.1	447.6	484.1
142.5°	289.4	292.6	301.0	312.3	327.9	346.4	368.7	391.8	416.9	443.8	476.4
145°	301.5	303.8	310.7	322.3	335.7	353.8	374.3	395.6	417.7	441.3	468.0
147.5°	313.2	314.6	321.5	331.7	344.7	360.2	379.0	398.1	417.7	438.4	460.4
150°	321.3	322.1	328.4	338.7	349.7	364.0	382.1	398.7	417.7	435.9	455.6
152.5°	329.5	329.7	336.0	345.1	354.8	368.4	384.1	400.0	415.8	432.6	450.5
155°	341.8	341.8	346.6	354.5	363.1	374.3	387.7	400.3	413.7	427.2	442.9
157.5°	351.6	352.2	356.1	363.0	370.4	379.0	389.7	401.1	411.0	422.2	434.4
160°	359.2	359.2	362.4	368.7	374.3	382.1	391.6	401.1	409.8	418.5	428.7
162.5°	365.0	365.0	367.5	372.5	377.4	384.1	392.2	400.4	407.3	414.7	423.0
165°	373.4	372.6	374.3	378.2	381.3	386.9	393.1	398.7	403.4	409.0	415.3
167.5°	379.9	379.0	379.8	382.7	385.0	388.5	393.0	397.5	399.7	403.3	407.9
170°	383.7	382.1	382.9	385.3	386.9	388.5	392.4	395.6	397.2	399.5	403.4
172.5°	386.3	385.3	385.5	387.2	388.1	389.1	392.4	395.0	395.3	396.4	399.0
175°	389.2	388.5	387.7	389.2	389.2	390.0	391.6	393.1	392.4	392.4	393.9
177.5°	390.6	390.0	389.4	390.0	390.0	390.0	390.6	391.9	390.6	390.0	390.6
180°	390.0	390.0	390.0	390.0	390.0	390.0	390.0	390.0	390.0	390.0	390.0



TEST NUMBER: P331933-840

CATALOG NUMBER: S123DIP-S560D805U840-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	710.1	710.1	710.1	710.1	710.1	710.1	710.1	710.1
2.5°	708.6	709.7	710.8	711.3	711.1	711.0	710.9	710.7
5°	707.5	708.8	710.2	710.8	710.6	710.4	710.3	710.1
7.5°	703.2	704.9	706.7	707.4	707.2	707.0	706.8	706.6
10°	698.9	700.6	702.4	703.0	702.7	702.4	702.0	701.7
12.5°	693.1	694.6	696.2	696.8	696.5	696.1	695.8	695.5
15°	681.9	683.6	685.3	686.1	685.9	685.7	685.6	685.4
17.5°	667.3	668.8	670.3	671.1	670.8	670.6	670.3	670.0
20°	656.8	658.3	659.8	660.8	660.9	661.1	661.3	661.4
22.5°	645.2	647.2	649.1	650.1	649.9	649.8	649.7	649.6
25°	625.6	627.9	630.2	631.3	631.3	631.3	631.3	631.3
27.5°	605.2	607.1	609.0	610.2	610.3	610.4	610.6	610.7
30°	591.3	593.3	595.4	596.4	596.4	596.4	596.4	596.4
32.5°	576.0	578.2	580.5	581.8	582.2	582.6	583.0	583.4
35°	553.6	556.2	558.8	560.4	561.1	561.8	562.5	563.2
37.5°	530.3	533.2	536.1	538.0	538.5	539.0	539.6	540.1
40°	514.8	517.8	520.7	522.5	523.2	523.9	524.5	525.2
42.5°	498.7	501.9	505.1	507.2	508.2	509.1	510.1	511.0
45°	474.5	477.8	481.1	483.4	484.7	486.1	487.6	488.9
47.5°	450.2	453.8	457.5	459.9	460.9	462.0	463.1	464.1
50°	433.3	437.4	441.3	443.8	445.0	446.3	447.5	448.7
52.5°	416.4	420.4	424.5	427.3	428.8	430.2	431.7	433.2
55°	390.6	395.3	399.9	402.9	404.3	405.7	407.1	408.5
57.5°	364.5	369.1	373.8	376.9	378.5	380.1	381.7	383.3
60°	346.2	350.9	355.8	359.1	361.0	362.8	364.8	366.7
62.5°	328.8	333.7	338.4	341.7	343.5	345.2	347.0	348.7
65°	301.1	306.3	311.5	315.0	316.7	318.4	320.1	321.8
67.5°	273.7	279.3	285.0	288.5	289.9	291.3	292.9	294.3
70°	255.5	260.9	266.5	270.0	271.8	273.5	275.2	276.9
72.5°	237.1	242.8	248.4	252.2	253.9	255.6	257.3	259.0
75°	209.3	215.1	220.8	224.6	226.6	228.7	230.8	232.9
77.5°	183.4	189.3	195.3	199.1	200.8	202.3	203.9	205.5
80°	166.4	172.3	178.1	181.9	183.6	185.3	187.0	188.7
82.5°	151.0	156.7	162.6	166.4	168.1	169.9	171.6	173.3
85°	129.3	135.1	141.0	144.7	146.4	148.1	149.9	151.6
87.5°	114.2	120.2	126.2	130.3	131.9	133.7	135.6	137.1
90°	118.9	125.5	132.1	137.4	138.4	140.9	143.4	144.3
92.5°	160.4	152.3	151.9	151.4	151.6	150.8	153.2	153.3
95°	371.4	285.2	248.7	223.8	210.6	205.1	201.4	199.9
97.5°	789.8	653.9	557.1	466.2	409.6	375.8	356.2	351.1
100°	1008.1	949.2	861.8	753.1	675.0	619.0	590.0	592.5
102.5°	1078.0	1080.9	1031.9	964.0	903.7	859.8	835.8	819.3
105°	1094.1	1177.8	1197.6	1180.2	1145.5	1117.0	1093.3	1091.0
107.5°	1026.0	1158.8	1232.6	1263.7	1265.9	1257.3	1250.3	1244.6
110°	963.2	1113.0	1217.0	1275.2	1298.6	1306.3	1306.1	1305.9



TEST NUMBER: P331933-840

CATALOG NUMBER: S123DIP-S560D805U840-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	900.5	1053.3	1169.1	1243.0	1285.1	1306.2	1313.6	1315.5
115°	817.5	959.0	1079.1	1168.0	1228.6	1264.7	1281.8	1287.2
117.5°	755.6	878.3	986.6	1076.6	1139.7	1180.8	1205.0	1211.6
120°	722.6	833.1	931.8	1014.1	1077.7	1123.1	1143.3	1149.2
122.5°	695.8	796.1	887.8	964.3	1020.9	1061.9	1084.0	1091.2
125°	659.6	749.3	828.7	894.3	946.0	982.0	1002.9	1009.7
127.5°	627.4	707.6	779.3	839.1	885.3	916.1	935.1	941.4
130°	607.0	681.4	748.5	804.4	847.3	876.8	894.3	901.7
132.5°	587.8	656.3	719.0	772.3	812.8	842.4	858.3	863.8
135°	561.8	621.0	675.4	722.4	761.9	786.5	801.5	807.9
137.5°	538.0	586.6	633.5	674.3	707.7	732.6	745.5	749.9
140°	523.8	566.6	607.1	642.8	673.7	696.6	710.1	710.2
142.5°	510.1	546.9	582.1	613.2	639.6	660.0	672.3	672.4
145°	494.6	522.1	548.7	572.6	593.1	610.4	617.3	619.6
147.5°	482.1	503.2	524.0	540.8	556.4	568.3	574.8	576.1
150°	473.7	491.9	508.5	523.6	535.8	544.8	550.0	550.3
152.5°	466.8	482.4	497.1	509.6	519.0	527.1	530.0	530.1
155°	456.4	469.0	480.8	490.3	497.4	503.7	505.3	506.0
157.5°	445.2	455.9	465.0	472.4	478.6	483.3	484.6	484.4
160°	439.0	447.7	455.6	461.1	466.7	471.3	471.3	470.6
162.5°	431.4	438.8	446.1	451.0	454.6	458.7	458.7	458.0
165°	421.6	426.4	431.9	435.9	439.0	442.1	441.3	441.3
167.5°	413.0	416.7	419.9	422.7	424.1	426.4	425.6	425.6
170°	407.4	409.8	412.9	414.5	415.3	416.9	416.1	416.1
172.5°	402.3	404.0	406.6	407.6	407.7	409.3	407.9	407.3
175°	395.6	396.4	397.9	397.9	397.9	398.7	397.9	397.2
177.5°	391.3	391.9	392.5	392.5	391.9	392.5	391.3	391.3
180°	390.0	390.0	390.0	390.0	390.0	390.0	390.0	390.0

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