

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: P332005-930

Luminaire Tested: **S123DIP-S1000D365U930-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

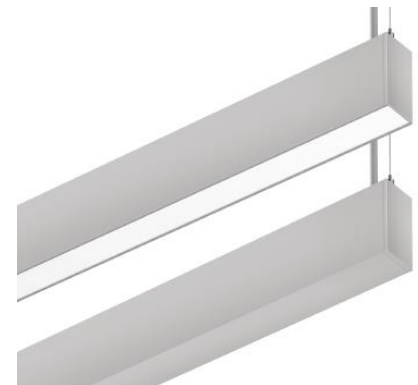
**Test Information**

Test Method: LM-79-08  
Report Number: P332005-930  
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-S1000D365U930-4F0-1E-UDD-D4  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 365 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

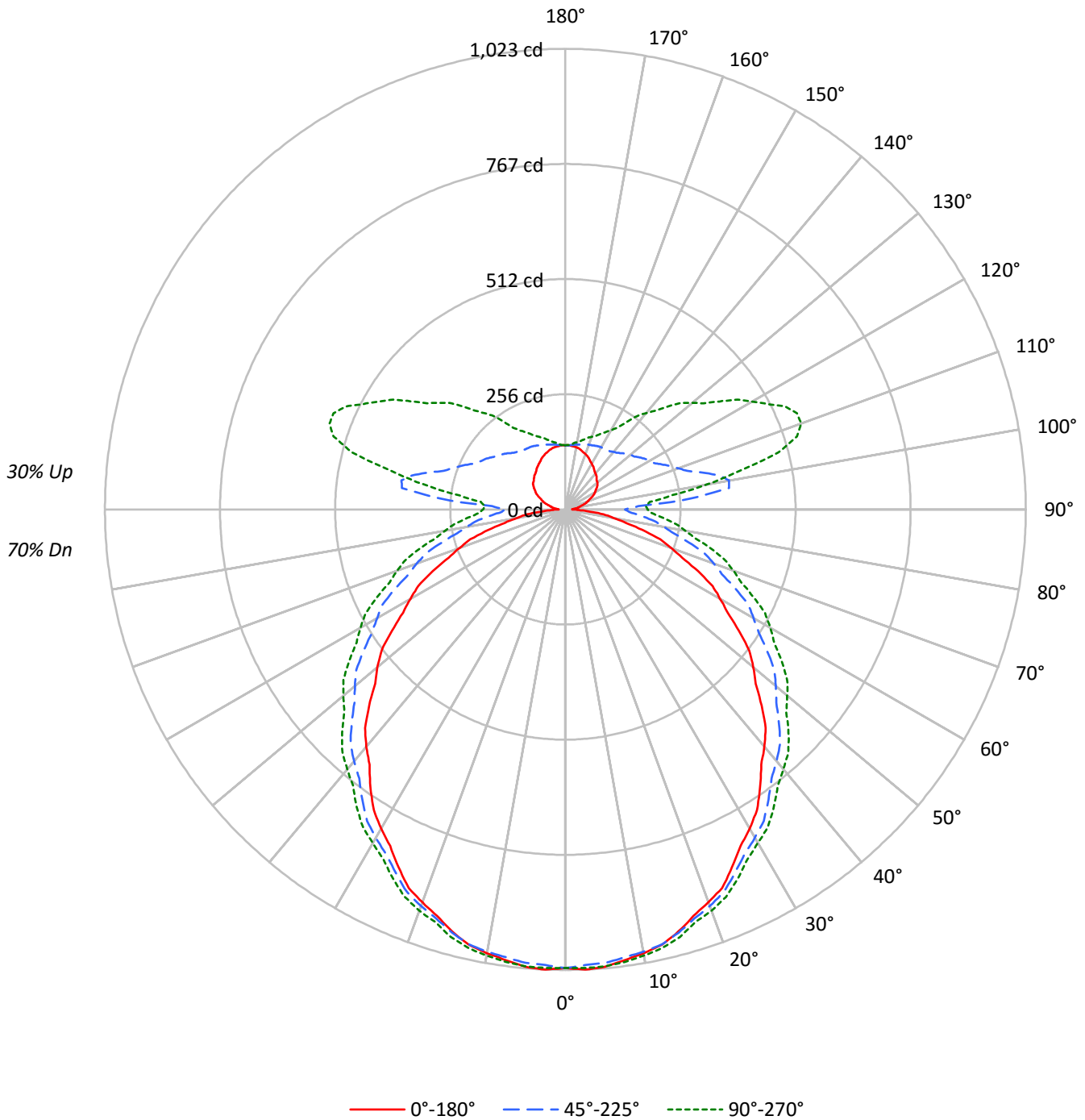
Lumens per Lamp: N/A  
Luminaire Lumens: 4495.0 lumens  
Efficiency: N/A  
Efficacy: 103.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')  
CIE Type: Semi-Direct

Input Watts (W): 43.5  
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	50	30	10	0	
RCR																						
0	112	112	112	112	106	106	106	106	94	94	94	84	84	84	74	74	74	74	74	74	70	
1	101	96	91	87	95	90	86	83	81	77	75	72	69	67	63	62	60	60	60	60	56	
2	91	83	76	70	86	78	72	67	70	65	61	62	58	55	55	52	49	49	49	49	46	
3	83	72	64	58	78	68	61	55	61	55	50	54	50	46	48	45	41	41	41	41	38	
4	76	64	55	48	71	60	53	46	54	48	43	48	43	39	43	39	35	35	35	35	32	
5	69	57	48	41	65	54	46	40	48	42	37	43	38	34	38	34	31	31	31	31	28	
6	64	51	42	36	60	48	40	35	44	37	32	39	34	29	35	30	27	27	27	27	24	
7	59	46	37	31	56	44	36	30	39	33	28	36	30	26	32	27	24	24	24	24	21	
8	55	42	34	28	52	40	32	27	36	30	25	33	27	23	29	25	21	21	21	21	19	
9	51	38	30	25	48	36	29	24	33	27	22	30	25	21	27	22	19	19	19	19	17	
10	48	35	27	22	45	34	26	22	31	24	20	28	22	19	25	21	17	17	17	17	15	

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	10964	10964	10964
5°	10999	10689	10694
10°	10900	10443	10390
15°	10759	10162	10058
20°	10559	9844	9692
25°	10311	9476	9308
30°	10057	9145	8918
35°	9773	8796	8606
40°	9500	8479	8272
45°	9199	8172	8007
50°	8904	7871	7713
55°	8574	7562	7449
60°	8255	7248	7178
65°	7926	6915	6856
70°	7430	6538	6527
75°	6807	6107	6190
80°	6087	5683	5807
85°	5426	5394	5585



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	96.6	2.1
10°-20°	275.3	6.1
20°-30°	411.7	9.2
30°-40°	491.7	10.9
40°-50°	514.4	11.4
50°-60°	482.8	10.7
60°-70°	403.2	9.0
70°-80°	288.5	6.4
80°-90°	173.1	3.9
90°-100°	187.1	4.2
100°-110°	303.6	6.8
110°-120°	273.6	6.1
120°-130°	206.3	4.6
130°-140°	152.3	3.4
140°-150°	106.5	2.4
150°-160°	72.2	1.6
160°-170°	42.4	0.9
170°-180°	13.8	0.3
0°-30°	783.6	17.4
0°-40°	1275.2	28.4
0°-60°	2272.4	50.6
0°-90°	3137.2	69.8
90°-120°	764.3	17.0
90°-150°	1229.4	27.4
90°-180°	1358.0	30.2
0°-180°	4495.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1019	1019	1019	1019	1019	
5°	1020	1017	1011	1019	1019	97
15°	971	974	973	984	983	273
25°	877	887	891	905	906	404
35°	755	772	787	803	808	472
45°	617	644	671	692	701	476
55°	470	507	547	576	586	421
65°	325	369	417	449	462	321
75°	176	229	284	319	334	188
85°	54	110	169	205	218	57
90°	15	72	133	170	182	11
95°	22	88	281	193	189	20
105°	42	86	315	518	491	44
115°	65	94	236	473	540	64
125°	85	102	201	358	418	76
135°	98	117	176	279	324	76
145°	111	126	161	211	236	69
155°	125	135	156	177	185	57
165°	136	140	149	158	161	38
175°	142	142	143	145	145	13
180°	142	142	142	142	142	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6
2.5°	1023.1	1022.5	1021.9	1021.3	1020.8	1019.6	1018.1	1016.5	1014.9	1013.3	1014.9
5°	1019.8	1019.3	1018.8	1018.3	1017.8	1016.8	1015.4	1013.8	1012.4	1010.9	1012.8
7.5°	1009.7	1009.9	1010.0	1010.1	1010.2	1009.5	1008.1	1006.7	1005.2	1003.8	1006.2
10°	1000.9	1001.4	1001.9	1002.4	1002.9	1002.5	1001.3	1000.0	998.8	997.6	1000.0
12.5°	990.3	990.9	991.6	992.3	993.0	993.0	992.1	991.2	990.4	989.6	991.9
15°	970.9	971.7	972.4	973.1	973.9	974.1	973.9	973.6	973.4	973.1	975.7
17.5°	946.6	948.0	949.5	951.0	952.4	953.2	953.1	952.9	952.8	952.8	955.0
20°	928.8	930.3	931.7	933.2	934.7	935.7	936.2	936.7	937.2	937.7	939.9
22.5°	910.1	911.6	913.1	914.6	916.1	917.1	917.9	918.5	919.2	919.9	922.7
25°	876.6	879.1	881.6	884.0	886.5	888.1	888.8	889.6	890.3	891.0	894.2
27.5°	842.9	845.7	848.5	851.3	854.1	856.3	857.9	859.5	861.0	862.7	865.4
30°	818.9	822.1	825.3	828.5	831.8	834.3	836.3	838.3	840.2	842.2	845.2
32.5°	792.3	795.9	799.5	803.1	806.7	809.8	812.4	814.9	817.5	820.0	823.2
35°	754.6	758.5	762.5	766.4	770.4	773.9	777.1	780.3	783.5	786.8	790.4
37.5°	714.6	719.1	723.5	727.9	732.4	736.5	740.5	744.4	748.4	752.4	756.5
40°	687.9	692.4	696.8	701.3	705.7	710.5	715.3	720.3	725.2	730.2	734.3
42.5°	658.7	664.1	669.5	675.0	680.4	685.7	690.8	695.9	701.1	706.2	710.8
45°	616.9	622.9	628.8	634.7	640.7	646.7	652.8	659.0	665.2	671.3	676.0
47.5°	573.2	579.9	586.7	593.4	600.1	607.0	614.0	621.1	628.1	635.2	640.4
50°	544.9	551.7	558.6	565.6	572.4	579.8	587.3	595.0	602.7	610.3	616.0
52.5°	514.6	522.0	529.3	536.5	543.9	551.7	560.2	568.6	577.0	585.5	591.3
55°	470.5	478.7	486.7	494.9	503.0	511.5	520.4	529.3	538.2	547.1	553.8
57.5°	427.5	435.9	444.4	452.9	461.4	470.5	480.2	489.9	499.6	509.3	516.0
60°	397.3	406.1	415.0	423.9	432.8	442.2	452.3	462.5	472.6	482.7	489.6
62.5°	368.8	377.9	387.0	396.1	405.1	415.1	425.7	436.4	447.1	457.9	464.7
65°	325.1	334.8	344.4	354.0	363.6	373.8	384.7	395.5	406.3	417.3	424.6
67.5°	280.7	291.0	301.2	311.4	321.6	332.2	343.2	354.3	365.3	376.4	384.5
70°	249.6	260.2	270.8	281.5	292.1	303.3	315.1	327.0	338.8	350.7	358.6
72.5°	221.3	231.9	242.5	253.1	263.7	275.1	287.3	299.5	311.8	324.0	332.1
75°	176.4	188.0	199.6	211.2	222.8	234.7	247.1	259.4	271.7	284.1	292.2
77.5°	137.4	149.0	160.8	172.4	184.1	196.2	208.6	221.0	233.5	245.9	254.5
80°	109.8	122.0	134.0	146.1	158.2	170.6	183.4	196.3	209.1	221.9	230.3
82.5°	85.9	98.2	110.5	122.7	135.0	147.7	160.7	173.7	186.7	199.7	208.1
85°	54.4	66.7	79.0	91.4	103.7	116.4	129.5	142.5	155.6	168.7	177.1
87.5°	29.6	42.0	54.5	66.9	79.2	91.8	104.6	117.3	130.0	142.8	151.2
90°	15.0	27.6	40.4	53.2	66.0	78.8	92.3	105.7	119.1	132.6	140.7
92.5°	17.1	29.8	43.0	56.2	69.5	85.4	105.3	130.1	154.7	162.6	159.9
95°	22.0	32.4	45.2	59.8	76.9	99.0	135.6	190.5	249.9	280.7	256.1
97.5°	27.6	36.5	47.7	60.7	76.7	99.0	134.0	193.9	284.1	366.6	392.5
100°	31.3	39.5	49.4	61.3	76.1	96.9	128.5	182.5	269.6	369.4	433.3
102.5°	35.2	42.9	51.8	62.7	76.0	95.5	124.7	172.0	250.6	349.1	430.1
105°	42.3	49.1	56.7	66.1	77.5	94.7	120.8	161.1	226.2	314.9	404.5
107.5°	48.7	54.5	61.3	69.7	79.9	95.7	119.4	154.2	208.1	284.0	365.7
110°	53.3	58.6	64.5	72.2	81.4	96.7	119.5	151.2	199.7	266.4	341.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	58.4	62.9	68.0	74.8	83.4	97.8	119.3	149.0	192.5	252.3	319.3
115°	64.6	68.7	73.4	79.2	87.1	100.8	120.7	147.1	185.3	236.0	291.8
117.5°	71.7	74.8	78.1	82.6	89.9	102.2	121.3	145.4	178.6	222.7	271.7
120°	75.9	78.0	80.6	84.8	91.5	103.4	121.9	145.0	175.3	215.7	260.6
122.5°	80.3	81.8	83.9	87.6	93.5	105.3	123.3	144.8	172.9	209.7	250.6
125°	85.4	86.0	87.7	90.9	96.4	107.8	125.0	144.8	169.3	200.9	236.9
127.5°	90.3	90.8	92.7	95.7	101.5	112.1	127.8	145.1	166.6	193.2	224.0
130°	93.2	93.8	96.2	99.4	105.2	115.3	129.8	145.6	165.0	188.1	216.1
132.5°	94.7	95.7	98.5	102.6	108.5	118.1	131.3	145.9	162.9	183.4	208.5
135°	98.5	99.4	102.2	106.3	112.2	121.2	132.8	145.3	159.6	176.3	197.8
137.5°	102.0	103.1	106.0	110.4	116.2	124.0	134.1	145.0	156.8	170.4	188.6
140°	103.7	105.1	108.0	112.6	118.4	126.0	135.0	144.4	155.0	166.6	182.7
142.5°	106.5	107.5	110.4	114.3	119.8	126.6	134.9	143.4	152.7	162.7	176.9
145°	110.9	111.5	113.8	117.9	122.5	129.1	136.6	144.3	152.4	161.0	172.3
147.5°	114.3	114.8	117.3	121.1	125.8	131.4	138.3	145.3	152.4	160.0	168.4
150°	117.2	117.6	119.8	123.6	127.6	132.8	139.4	145.5	152.4	159.1	166.2
152.5°	120.3	120.3	122.6	125.9	129.5	134.4	140.1	145.9	151.7	157.9	164.4
155°	124.7	124.7	126.5	129.4	132.6	136.6	141.5	146.1	151.0	155.9	161.6
157.5°	128.3	128.6	130.0	132.5	135.2	138.3	142.2	146.3	150.0	154.1	158.5
160°	131.1	131.1	132.2	134.5	136.6	139.4	142.9	146.3	149.5	152.7	156.5
162.5°	133.1	133.1	134.1	135.9	137.7	140.1	143.2	146.1	148.6	151.3	154.3
165°	136.2	136.0	136.6	138.0	139.2	141.2	143.5	145.5	147.2	149.3	151.6
167.5°	138.6	138.3	138.6	139.7	140.5	141.8	143.4	145.0	145.9	147.2	148.9
170°	140.0	139.4	139.7	140.6	141.2	141.8	143.2	144.3	145.0	145.8	147.2
172.5°	141.0	140.6	140.6	141.3	141.6	141.9	143.2	144.1	144.2	144.6	145.6
175°	142.0	141.8	141.5	142.0	142.0	142.4	142.9	143.5	143.2	143.2	143.7
177.5°	142.6	142.4	142.1	142.4	142.4	142.4	142.6	143.0	142.6	142.4	142.6
180°	142.4	142.4	142.4	142.4	142.4	142.4	142.4	142.4	142.4	142.4	142.4



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6
2.5°	1016.5	1018.1	1019.6	1020.3	1020.1	1019.9	1019.8	1019.5
5°	1014.8	1016.8	1018.8	1019.6	1019.4	1019.1	1018.9	1018.6
7.5°	1008.7	1011.2	1013.7	1014.7	1014.5	1014.2	1013.8	1013.6
10°	1002.5	1004.9	1007.5	1008.4	1008.0	1007.5	1007.0	1006.5
12.5°	994.1	996.4	998.7	999.6	999.1	998.6	998.1	997.6
15°	978.1	980.6	983.0	984.1	983.9	983.7	983.4	983.2
17.5°	957.2	959.4	961.6	962.5	962.2	961.9	961.6	961.2
20°	942.1	944.3	946.6	947.8	948.0	948.3	948.5	948.8
22.5°	925.5	928.3	931.2	932.5	932.3	932.2	932.1	931.9
25°	897.5	900.7	903.8	905.5	905.5	905.5	905.5	905.5
27.5°	868.1	870.9	873.7	875.1	875.4	875.5	875.8	876.0
30°	848.2	851.1	854.0	855.6	855.6	855.6	855.6	855.6
32.5°	826.4	829.5	832.7	834.5	835.1	835.7	836.3	836.9
35°	794.1	797.9	801.5	803.9	804.9	805.8	806.8	807.8
37.5°	760.8	764.9	769.2	771.6	772.4	773.1	774.0	774.8
40°	738.5	742.7	746.9	749.5	750.5	751.5	752.4	753.4
42.5°	715.3	719.9	724.6	727.5	728.9	730.3	731.6	733.0
45°	680.7	685.4	690.1	693.4	695.4	697.3	699.4	701.3
47.5°	645.7	651.0	656.2	659.7	661.2	662.8	664.2	665.8
50°	621.7	627.3	633.0	636.7	638.5	640.2	641.9	643.6
52.5°	597.2	603.1	608.9	612.9	615.1	617.2	619.3	621.4
55°	560.4	567.0	573.7	578.0	580.0	582.0	583.9	585.9
57.5°	522.8	529.5	536.1	540.7	543.0	545.3	547.6	549.9
60°	496.5	503.4	510.3	515.1	517.9	520.6	523.3	525.9
62.5°	471.7	478.6	485.4	490.2	492.7	495.2	497.7	500.3
65°	432.0	439.4	446.8	451.8	454.2	456.6	459.2	461.6
67.5°	392.6	400.6	408.7	413.8	415.9	418.0	420.0	422.1
70°	366.4	374.3	382.2	387.4	389.9	392.3	394.8	397.3
72.5°	340.2	348.3	356.4	361.7	364.1	366.6	369.1	371.5
75°	300.4	308.5	316.6	322.2	325.1	328.1	331.0	334.0
77.5°	263.1	271.7	280.2	285.7	287.9	290.2	292.4	294.7
80°	238.7	247.1	255.4	260.9	263.3	265.8	268.3	270.8
82.5°	216.5	224.9	233.3	238.7	241.2	243.6	246.1	248.6
85°	185.4	193.8	202.2	207.7	210.1	212.5	215.0	217.5
87.5°	159.6	168.0	176.4	182.0	184.4	186.9	189.5	191.8
90°	149.4	158.0	166.7	172.7	174.9	177.7	180.4	182.5
92.5°	158.9	162.1	168.0	171.8	173.5	174.9	177.5	179.2
95°	228.9	203.1	195.4	190.1	187.1	187.0	187.4	188.7
97.5°	375.1	331.0	301.2	271.7	252.8	242.3	237.0	237.0
100°	450.5	434.3	407.8	371.7	345.0	326.4	317.7	320.5
102.5°	471.7	478.0	465.3	444.1	423.9	409.7	402.8	398.6
105°	471.6	507.3	519.7	516.7	505.7	497.0	490.0	490.7
107.5°	440.5	493.9	525.8	540.4	542.8	541.3	540.4	539.9
110°	414.0	473.4	516.2	540.5	550.6	554.8	556.2	557.6





TEST NUMBER: P332005-930

CATALOG NUMBER: S123DIP-S1000D365U930-4F0-1E-UDD-D4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	386.9	447.3	494.2	524.2	541.2	550.5	554.9	557.2
115°	351.0	407.0	455.3	490.6	514.2	528.9	536.6	540.1
117.5°	322.5	371.7	415.6	451.3	475.8	492.3	502.5	506.4
120°	306.9	351.5	391.7	424.5	449.0	466.8	475.5	478.9
122.5°	293.5	334.2	371.7	402.4	424.3	440.5	449.9	453.8
125°	274.9	311.5	344.3	370.8	391.0	405.4	414.3	418.1
127.5°	257.7	290.7	320.5	344.7	362.8	375.4	383.5	387.0
130°	246.7	277.3	305.3	328.0	344.8	356.6	364.1	367.9
132.5°	236.1	264.5	290.7	312.4	328.4	340.5	347.5	350.8
135°	221.6	246.5	269.6	288.9	304.3	314.1	320.5	323.8
137.5°	208.1	228.7	248.7	265.5	278.7	288.6	294.2	296.9
140°	200.0	218.3	235.9	250.8	262.9	272.2	278.1	279.0
142.5°	191.7	207.7	222.9	235.9	246.5	254.9	260.3	261.2
145°	183.4	194.9	206.1	216.0	224.1	231.1	234.5	236.0
147.5°	176.8	185.0	193.0	199.7	206.0	211.0	214.1	215.2
150°	172.8	179.5	185.6	191.3	196.1	199.7	201.9	202.4
152.5°	170.3	176.0	181.4	186.0	189.5	192.5	193.6	193.8
155°	166.6	171.1	175.5	178.9	181.5	183.8	184.4	184.7
157.5°	162.5	166.3	169.7	172.4	174.6	176.3	176.8	176.8
160°	160.2	163.4	166.2	168.3	170.2	172.0	172.0	171.7
162.5°	157.4	160.1	162.8	164.6	165.9	167.4	167.4	167.1
165°	153.8	155.6	157.6	159.1	160.2	161.3	161.0	161.0
167.5°	150.7	152.1	153.2	154.3	154.7	155.6	155.3	155.3
170°	148.6	149.5	150.7	151.2	151.6	152.1	151.8	151.8
172.5°	146.8	147.5	148.4	148.7	148.8	149.4	148.9	148.6
175°	144.3	144.6	145.2	145.2	145.2	145.5	145.2	145.0
177.5°	142.8	143.0	143.2	143.2	143.0	143.2	142.8	142.8
180°	142.4	142.4	142.4	142.4	142.4	142.4	142.4	142.4

(END OF REPORT)