

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: P332003-930

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332003-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
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-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4606.8 lumens
Efficiency: N/A
Efficacy: 105.9 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

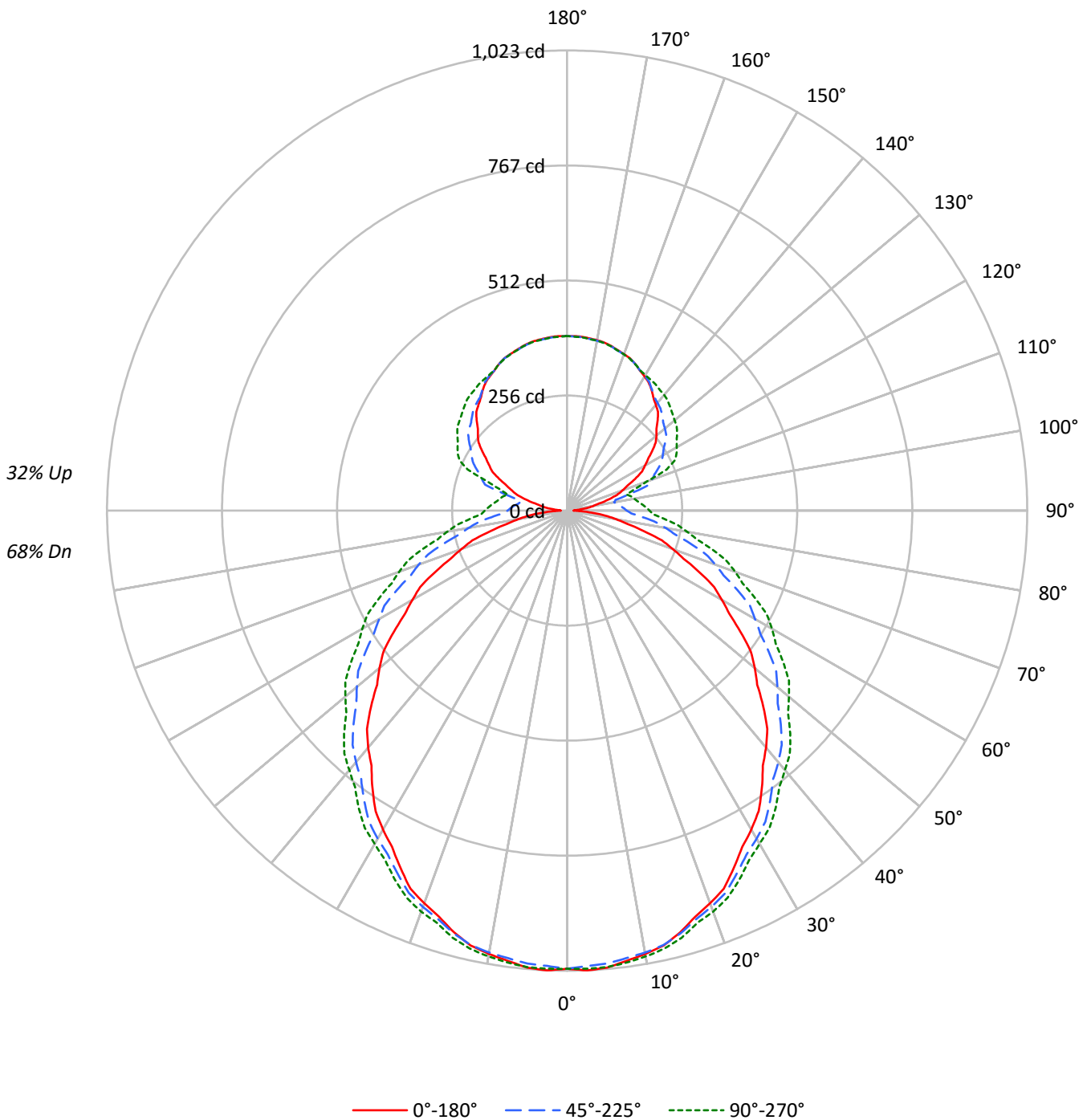
Input Watts (W): 43.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332003-930

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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	83	83	83	73	73	73	68
1	100	95	91	87	94	90	86	82	80	77	74	71	68	66	62	60	59	54
2	91	82	76	70	85	78	72	66	69	64	60	61	57	54	54	51	48	44
3	83	72	64	57	77	68	61	55	61	55	50	54	49	45	47	44	40	37
4	75	64	55	48	71	60	52	46	54	47	42	48	42	38	42	38	35	31
5	69	57	48	41	65	54	46	40	48	41	36	43	37	33	38	33	30	27
6	64	51	42	36	60	48	40	34	43	37	32	38	33	29	34	30	26	24
7	59	46	37	31	55	44	36	30	39	33	28	35	30	25	31	27	23	21
8	55	42	33	28	51	40	32	27	36	29	25	32	27	23	29	24	21	18
9	51	38	30	25	48	36	29	24	33	26	22	29	24	20	26	22	19	17
10	48	35	27	22	45	33	26	21	30	24	20	27	22	18	24	20	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	6.0
20°-30°	411.7	8.9
30°-40°	491.7	10.7
40°-50°	514.4	11.2
50°-60°	482.8	10.5
60°-70°	403.2	8.8
70°-80°	288.5	6.3
80°-90°	173.1	3.8
90°-100°	122.0	2.6
100°-110°	146.5	3.2
110°-120°	214.4	4.7
120°-130°	235.8	5.1
130°-140°	233.2	5.1
140°-150°	208.3	4.5
150°-160°	165.7	3.6
160°-170°	106.9	2.3
170°-180°	36.8	0.8
0°-30°	783.6	17.0
0°-40°	1275.2	27.7
0°-60°	2272.4	49.3
0°-90°	3137.2	68.1
90°-120°	482.9	10.5
90°-150°	1160.2	25.2
90°-180°	1470.0	31.9
0°-180°	4606.8	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	132	170	183	11
95°	30	63	119	154	166	31
105°	95	124	146	128	137	100
115°	167	183	224	253	264	165
125°	230	234	266	289	298	206
135°	285	286	299	319	324	219
145°	327	328	329	338	343	205
155°	359	359	359	360	359	165
165°	379	378	378	380	378	107
175°	388	386	387	388	386	37
180°	388	388	388	388	388	



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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	54.4	66.8	79.2	91.8	104.5	117.2	130.0	142.8	151.2
90°	14.7	27.5	40.2	52.9	65.6	78.7	92.0	105.5	118.9	132.3	141.0
92.5°	18.9	29.6	40.4	51.0	61.8	73.6	86.7	99.6	112.7	125.6	134.3
95°	29.8	36.8	43.8	50.8	57.7	67.7	80.4	93.2	106.0	118.8	126.9
97.5°	46.2	53.7	61.2	68.7	76.2	83.4	90.3	97.3	104.2	111.1	119.0
100°	58.7	67.8	77.0	86.2	95.4	100.6	102.0	103.3	104.7	106.1	113.7
102.5°	73.0	81.0	89.0	97.1	105.1	109.3	109.5	109.7	109.9	110.1	115.5
105°	94.7	101.3	107.9	114.6	121.2	126.9	131.8	136.6	141.5	146.3	141.9
107.5°	116.6	122.1	127.8	133.4	138.9	147.2	158.2	169.2	180.1	191.1	189.4
110°	131.1	136.1	141.0	145.9	150.9	158.7	169.3	179.9	190.4	201.0	205.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	145.9	150.0	154.1	158.2	162.3	169.4	179.6	189.8	200.0	210.2	216.4
115°	166.6	169.9	173.3	176.6	179.9	186.4	195.8	205.3	214.7	224.2	230.7
117.5°	187.5	189.8	192.1	194.4	196.7	202.2	210.8	219.5	228.0	236.7	243.0
120°	199.7	201.5	203.4	205.2	207.0	212.1	220.4	228.8	237.1	245.4	251.6
122.5°	213.1	214.3	215.4	216.5	217.6	222.2	230.2	238.1	246.1	254.1	259.9
125°	230.3	230.9	231.4	231.9	232.4	236.4	243.8	251.2	258.6	266.0	271.3
127.5°	248.1	248.3	248.7	248.9	249.2	252.4	258.6	264.9	271.1	277.3	282.4
130°	259.2	259.4	259.7	260.0	260.2	262.9	268.2	273.3	278.5	283.7	288.6
132.5°	268.9	269.4	269.8	270.3	270.8	273.0	277.2	281.4	285.5	289.7	294.4
135°	284.9	284.9	285.1	285.3	285.4	287.0	289.9	292.9	295.9	298.8	303.5
137.5°	298.5	298.7	299.1	299.3	299.6	300.6	302.2	303.9	305.6	307.3	311.4
140°	306.8	307.2	307.5	307.9	308.3	309.0	309.9	310.9	311.8	312.7	316.7
142.5°	315.3	315.5	315.7	315.8	316.1	316.3	316.7	317.0	317.3	317.7	321.2
145°	327.3	327.4	327.7	327.8	328.1	328.2	328.3	328.5	328.6	328.7	330.8
147.5°	337.4	337.7	337.9	338.3	338.5	338.8	338.9	339.0	339.2	339.2	340.0
150°	344.3	344.5	344.6	344.9	345.0	345.2	345.4	345.4	345.6	345.7	345.8
152.5°	350.5	350.6	350.7	350.7	350.8	351.0	351.0	351.1	351.1	351.2	351.5
155°	359.3	359.1	359.0	358.9	358.7	358.7	358.8	358.8	358.9	359.0	359.3
157.5°	366.1	366.1	366.1	366.0	366.0	366.0	365.9	365.8	365.7	365.7	366.1
160°	370.2	370.1	370.1	370.0	370.0	369.9	369.8	369.7	369.7	369.7	370.0
162.5°	374.1	374.0	373.8	373.7	373.5	373.3	373.2	373.2	373.2	373.1	373.5
165°	378.9	378.6	378.5	378.3	378.1	378.0	377.9	377.8	377.7	377.7	378.2
167.5°	382.5	382.3	382.0	381.8	381.5	381.4	381.4	381.4	381.4	381.4	381.9
170°	384.6	384.3	384.1	383.8	383.6	383.4	383.4	383.4	383.4	383.4	384.0
172.5°	386.0	385.7	385.4	385.1	384.7	384.7	384.7	384.7	384.8	384.8	385.4
175°	387.8	387.4	387.1	386.9	386.5	386.4	386.5	386.5	386.5	386.6	387.1
177.5°	388.2	388.0	387.8	387.5	387.2	387.1	387.2	387.2	387.3	387.3	387.8
180°	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8



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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	176.5	182.0	184.4	186.9	189.4	191.9
90°	149.6	158.2	166.9	172.5	175.0	177.7	180.3	182.9
92.5°	142.8	151.5	160.0	165.5	167.9	170.2	172.5	174.9
95°	134.9	143.1	151.2	156.5	158.9	161.3	163.8	166.3
97.5°	126.9	134.7	142.6	147.8	150.3	152.9	155.4	157.9
100°	121.4	129.1	136.7	141.8	144.3	146.8	149.4	151.9
102.5°	120.9	126.3	131.7	135.6	138.2	140.8	143.3	145.9
105°	137.5	133.1	128.6	127.6	129.9	132.2	134.6	137.0
107.5°	187.7	186.0	184.3	180.3	173.9	167.5	161.2	154.7
110°	209.5	213.9	218.2	216.7	209.5	202.4	195.2	188.0



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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	222.7	228.9	235.1	238.4	238.6	238.9	239.1	239.4
115°	237.3	243.9	250.4	254.8	257.1	259.3	261.5	263.7
117.5°	249.5	255.8	262.2	266.4	268.4	270.4	272.3	274.3
120°	257.8	263.9	270.1	274.1	275.8	277.5	279.2	281.0
122.5°	265.8	271.6	277.4	281.2	283.0	284.8	286.6	288.4
125°	276.6	281.9	287.2	290.8	292.6	294.5	296.4	298.2
127.5°	287.5	292.6	297.7	301.0	302.6	304.1	305.7	307.2
130°	293.6	298.6	303.5	306.6	307.9	309.3	310.7	312.0
132.5°	299.1	303.9	308.6	311.8	313.2	314.7	316.3	317.7
135°	308.1	312.7	317.3	320.2	321.2	322.3	323.3	324.3
137.5°	315.7	319.8	324.1	326.8	327.8	329.0	330.0	331.2
140°	320.7	324.6	328.6	331.1	332.2	333.3	334.4	335.5
142.5°	324.7	328.2	331.7	334.0	335.1	336.1	337.1	338.2
145°	332.9	335.0	337.1	338.7	339.7	340.6	341.6	342.6
147.5°	340.7	341.4	342.2	342.8	343.4	344.0	344.5	345.2
150°	346.0	346.1	346.3	346.4	346.7	347.1	347.3	347.6
152.5°	351.7	352.0	352.2	352.2	352.0	351.8	351.6	351.4
155°	359.6	360.0	360.3	360.2	359.9	359.5	359.1	358.7
157.5°	366.5	366.9	367.3	367.2	366.7	366.2	365.7	365.2
160°	370.4	370.8	371.2	371.1	370.7	370.2	369.8	369.3
162.5°	374.0	374.4	374.8	374.9	374.5	374.1	373.7	373.2
165°	378.7	379.3	379.8	379.8	379.4	378.9	378.5	378.0
167.5°	382.4	382.9	383.4	383.4	382.9	382.4	381.9	381.4
170°	384.5	385.0	385.5	385.5	385.0	384.5	384.0	383.4
172.5°	385.9	386.4	386.9	386.9	386.3	385.7	385.1	384.6
175°	387.5	388.0	388.4	388.4	387.9	387.3	386.9	386.4
177.5°	388.2	388.6	389.0	388.9	388.4	387.9	387.3	386.9
180°	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8

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