

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: P332511-930

Luminaire Tested: **S124DIP-S350D810U930-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332511-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIP-S350D810U930-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 810 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3813.6 lumens
Efficiency: N/A
Efficacy: 122.2 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

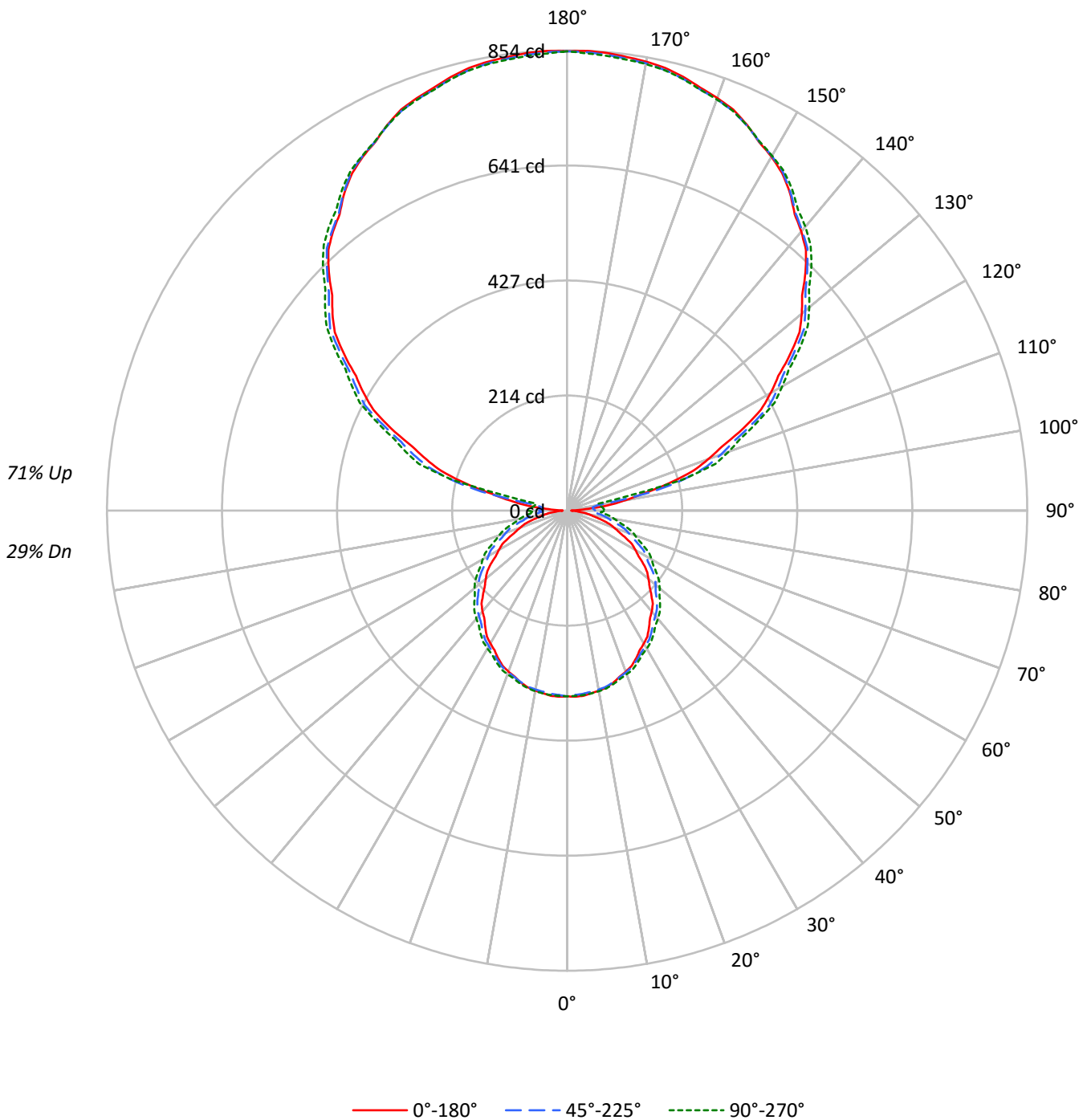
Input Watts (W): 31.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332511-930

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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	102	102	102	102	91	91	91	91	71	71	71	53	53	53	36	36	36	29
1	92	88	84	80	82	79	75	72	62	59	57	46	44	43	31	30	30	23
2	84	76	70	65	75	68	63	59	54	50	47	40	37	35	27	26	24	19
3	76	67	60	54	68	60	54	49	47	43	39	35	32	30	24	22	20	15
4	70	59	51	45	62	53	46	41	42	37	33	31	28	25	21	19	17	13
5	64	52	44	38	57	47	40	35	37	32	28	28	24	22	19	17	15	11
6	59	47	39	33	52	42	35	30	33	28	24	25	21	19	17	15	13	10
7	54	42	34	29	48	38	31	26	30	25	21	22	19	16	16	13	12	9
8	50	38	30	25	45	34	28	23	27	22	19	20	17	14	14	12	10	8
9	46	34	27	22	41	31	25	20	25	20	17	19	15	13	13	11	9	7
10	43	31	24	20	39	28	22	18	23	18	15	17	14	12	12	10	8	6

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2782	2782	2782
5°	2791	2719	2726
10°	2774	2675	2673
15°	2749	2623	2608
20°	2711	2566	2547
25°	2669	2503	2478
30°	2623	2439	2408
35°	2571	2374	2347
40°	2530	2313	2282
45°	2468	2256	2228
50°	2417	2190	2169
55°	2363	2129	2101
60°	2280	2049	2039
65°	2187	1965	1962
70°	2076	1868	1874
75°	1922	1763	1793
80°	1750	1660	1713
85°	1534	1571	1669



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.6	0.9
10°-20°	93.5	2.5
20°-30°	141.4	3.7
30°-40°	171.1	4.5
40°-50°	180.8	4.7
50°-60°	170.2	4.5
60°-70°	141.2	3.7
70°-80°	99.2	2.6
80°-90°	58.5	1.5
90°-100°	62.4	1.6
100°-110°	210.5	5.5
110°-120°	372.1	9.8
120°-130°	460.7	12.1
130°-140°	486.9	12.8
140°-150°	452.4	11.9
150°-160°	364.2	9.5
160°-170°	234.9	6.2
170°-180°	81.0	2.1
0°-30°	267.5	7.0
0°-40°	438.6	11.5
0°-60°	789.6	20.7
0°-90°	1088.5	28.5
90°-120°	645.1	16.9
90°-150°	2045.1	53.6
90°-180°	2725.0	71.5
0°-180°	3813.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	345	345	345	345	345	
5°	345	344	341	344	344	33
15°	331	331	330	333	333	93
25°	303	305	306	310	311	139
35°	265	269	273	278	280	166
45°	221	228	235	242	244	171
55°	173	181	193	200	203	154
65°	120	132	145	154	158	119
75°	66	81	97	107	111	71
85°	20	37	54	65	70	22
90°	8	30	52	67	72	6
95°	40	32	48	61	66	49
105°	195	207	224	238	220	205
115°	361	366	378	387	390	355
125°	505	508	516	525	528	451
135°	626	625	630	637	641	482
145°	721	722	722	725	728	450
155°	790	790	789	791	789	364
165°	833	830	830	834	829	235
175°	852	849	849	854	847	81
180°	852	852	852	852	852	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	344.6	344.6	344.6	344.6	344.6	344.6	344.6	344.6	344.6	344.6	344.6
2.5°	345.8	345.6	345.4	345.2	345.0	344.6	344.1	343.6	343.0	342.4	342.9
5°	345.0	344.7	344.5	344.2	344.0	343.6	342.9	342.3	341.8	341.1	341.9
7.5°	342.1	341.9	341.8	341.6	341.4	341.1	340.6	340.1	339.7	339.2	339.9
10°	339.6	339.5	339.4	339.3	339.2	339.0	338.6	338.1	337.7	337.3	338.0
12.5°	336.2	336.1	336.1	336.1	336.1	336.0	335.7	335.4	335.1	334.8	335.5
15°	330.7	330.8	330.9	331.0	331.1	331.0	330.7	330.4	330.2	330.0	330.7
17.5°	323.3	323.5	323.8	324.0	324.2	324.4	324.3	324.2	324.2	324.2	325.0
20°	318.0	318.2	318.5	318.8	319.0	319.2	319.3	319.4	319.4	319.5	320.4
22.5°	312.1	312.4	312.7	313.1	313.4	313.6	313.8	314.0	314.1	314.3	315.1
25°	302.6	303.0	303.6	304.1	304.6	305.0	305.2	305.5	305.7	306.1	307.0
27.5°	291.9	292.7	293.4	294.2	294.9	295.5	295.9	296.3	296.7	297.1	297.9
30°	284.8	285.5	286.2	286.8	287.6	288.2	288.8	289.3	290.0	290.6	291.6
32.5°	277.1	277.9	278.8	279.6	280.4	281.1	281.8	282.4	283.2	283.8	284.9
35°	264.7	265.8	266.8	267.8	268.9	269.8	270.7	271.5	272.4	273.2	274.4
37.5°	252.3	253.5	254.7	255.8	257.1	258.1	259.3	260.3	261.4	262.4	263.7
40°	244.3	245.4	246.5	247.6	248.7	249.9	251.1	252.3	253.5	254.7	256.0
42.5°	235.1	236.3	237.5	238.8	240.0	241.3	242.8	244.2	245.6	247.0	248.4
45°	220.7	222.3	224.0	225.6	227.2	228.9	230.5	232.1	233.7	235.4	236.8
47.5°	207.1	208.8	210.4	212.1	213.8	215.6	217.4	219.4	221.3	223.1	224.6
50°	197.2	199.1	201.0	202.8	204.7	206.6	208.6	210.4	212.3	214.2	215.9
52.5°	187.4	189.2	191.1	193.0	194.9	196.9	199.0	201.2	203.3	205.5	207.2
55°	172.9	174.7	176.5	178.3	180.1	182.3	184.8	187.4	190.0	192.6	194.3
57.5°	156.8	159.0	161.2	163.5	165.7	168.0	170.6	173.2	175.7	178.3	180.3
60°	146.3	148.5	150.7	153.0	155.2	157.7	160.5	163.4	166.2	169.0	171.0
62.5°	136.1	138.5	141.0	143.4	145.8	148.5	151.2	154.1	156.9	159.8	161.8
65°	119.6	122.4	125.1	127.8	130.6	133.5	136.3	139.3	142.2	145.1	147.2
67.5°	103.8	106.7	109.7	112.6	115.4	118.5	121.6	124.7	127.8	130.9	133.1
70°	93.0	95.9	98.8	101.7	104.7	107.8	111.0	114.3	117.6	120.8	123.1
72.5°	82.5	85.5	88.5	91.5	94.4	97.7	101.1	104.6	108.0	111.5	113.7
75°	66.4	69.5	72.7	75.9	79.1	82.4	86.1	89.7	93.3	96.9	99.3
77.5°	51.4	54.7	58.0	61.4	64.7	68.3	72.1	75.9	79.7	83.4	85.9
80°	42.1	45.5	48.9	52.3	55.8	59.4	63.2	66.9	70.7	74.5	77.0
82.5°	32.8	36.4	39.9	43.5	47.0	50.7	54.5	58.3	62.0	65.9	68.5
85°	20.5	24.1	27.6	31.2	34.9	38.6	42.5	46.3	50.1	54.1	56.6
87.5°	11.8	15.7	19.4	23.2	27.1	31.0	34.9	38.9	42.9	46.9	49.6
90°	8.1	13.0	18.1	23.1	28.0	32.9	37.7	42.6	47.4	52.3	55.6
92.5°	13.9	17.0	20.2	23.4	26.6	30.6	35.4	40.2	45.1	49.9	53.2
95°	40.1	38.1	36.1	34.1	32.1	32.9	36.6	40.3	43.9	47.6	50.8
97.5°	79.0	84.5	89.9	95.3	100.8	97.3	85.0	72.6	60.3	48.0	50.3
100°	108.8	113.6	118.4	123.1	127.9	122.2	106.0	89.8	73.6	57.4	57.3
102.5°	142.4	146.3	150.1	153.9	157.8	160.0	160.8	161.5	162.2	162.9	139.2
105°	195.3	198.0	200.5	203.0	205.6	208.8	212.7	216.6	220.5	224.4	227.8
107.5°	245.2	247.0	248.8	250.6	252.4	255.4	259.3	263.3	267.3	271.3	273.9
110°	278.5	280.1	281.8	283.3	284.9	287.7	291.6	295.4	299.3	303.1	305.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	310.8	312.7	314.5	316.3	318.1	320.7	323.9	327.2	330.4	333.7	335.6
115°	360.6	361.7	363.0	364.2	365.3	367.3	369.9	372.4	375.0	377.6	379.8
117.5°	405.8	406.8	407.8	408.9	409.9	411.8	414.7	417.6	420.4	423.3	425.0
120°	436.0	436.8	437.7	438.5	439.4	440.9	443.3	445.6	447.9	450.3	452.3
122.5°	464.6	465.0	465.4	465.8	466.2	467.7	470.2	472.7	475.3	477.8	479.7
125°	505.2	505.6	506.1	506.6	507.0	508.3	510.1	511.9	513.8	515.7	517.7
127.5°	543.8	543.9	544.0	544.0	544.0	545.2	547.6	549.8	552.1	554.4	555.9
130°	568.5	568.6	568.6	568.7	568.8	569.6	571.4	573.2	575.0	576.8	578.5
132.5°	591.5	591.7	591.8	592.0	592.2	593.0	594.7	596.3	597.9	599.6	601.2
135°	625.5	625.3	625.3	625.1	624.9	625.4	626.6	627.8	628.9	630.1	631.8
137.5°	656.0	655.9	655.9	655.9	655.8	656.3	657.2	658.1	659.0	660.0	661.5
140°	675.9	676.0	676.3	676.5	676.6	676.9	677.3	677.7	678.0	678.4	680.0
142.5°	693.4	693.9	694.4	694.9	695.4	695.7	695.8	695.9	696.0	696.2	697.4
145°	720.7	721.1	721.4	721.8	722.1	722.3	722.3	722.3	722.3	722.3	722.9
147.5°	742.6	743.2	744.0	744.7	745.3	745.7	745.5	745.3	745.2	745.1	745.3
150°	758.3	758.8	759.3	759.8	760.3	760.4	760.3	760.2	760.0	759.9	759.9
152.5°	771.3	771.8	772.2	772.6	773.1	773.1	772.9	772.7	772.3	772.1	772.3
155°	789.9	789.9	790.1	790.3	790.4	790.3	789.9	789.4	789.0	788.6	789.1
157.5°	805.5	805.4	805.4	805.3	805.2	804.9	804.4	804.0	803.5	803.0	803.7
160°	814.7	814.2	813.8	813.4	813.0	812.7	812.6	812.4	812.3	812.1	813.0
162.5°	822.9	822.3	821.7	821.3	820.7	820.4	820.2	820.1	819.9	819.8	820.7
165°	833.2	832.5	831.8	831.0	830.4	830.0	830.0	830.0	830.0	830.0	831.1
167.5°	841.3	840.6	839.8	839.1	838.4	838.0	837.9	837.8	837.7	837.6	838.9
170°	846.0	845.1	844.2	843.3	842.5	842.2	842.3	842.4	842.6	842.8	843.8
172.5°	849.0	848.2	847.3	846.4	845.6	845.2	845.4	845.5	845.6	845.8	846.9
175°	852.3	851.4	850.6	849.8	848.9	848.6	848.7	848.8	849.0	849.1	850.4
177.5°	853.9	853.0	852.2	851.4	850.7	850.4	850.6	850.8	851.1	851.3	852.2
180°	852.3	852.3	852.3	852.3	852.3	852.3	852.3	852.3	852.3	852.3	852.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	344.6	344.6	344.6	344.6	344.6	344.6	344.6	344.6
2.5°	343.4	343.9	344.4	344.5	344.5	344.5	344.4	344.3
5°	342.5	343.2	343.9	344.2	344.1	344.0	343.9	343.8
7.5°	340.7	341.4	342.3	342.6	342.5	342.4	342.3	342.3
10°	338.8	339.6	340.4	340.7	340.6	340.6	340.5	340.4
12.5°	336.2	337.0	337.6	337.9	337.9	337.9	337.9	337.9
15°	331.5	332.2	333.0	333.4	333.3	333.2	333.1	333.0
17.5°	325.7	326.5	327.3	327.7	327.6	327.5	327.5	327.4
20°	321.2	322.1	322.9	323.4	323.4	323.4	323.4	323.4
22.5°	316.0	316.8	317.7	318.2	318.4	318.5	318.6	318.8
25°	307.9	308.8	309.8	310.3	310.4	310.5	310.5	310.6
27.5°	298.8	299.7	300.6	301.1	301.2	301.3	301.3	301.5
30°	292.4	293.4	294.3	294.9	295.1	295.3	295.5	295.6
32.5°	285.9	287.1	288.1	288.8	288.9	289.1	289.3	289.4
35°	275.7	276.8	278.0	278.8	279.0	279.2	279.6	279.8
37.5°	264.9	266.0	267.3	268.1	268.3	268.6	268.9	269.1
40°	257.3	258.5	259.8	260.7	261.0	261.4	261.7	262.0
42.5°	249.8	251.3	252.7	253.6	253.8	254.0	254.4	254.6
45°	238.3	239.8	241.2	242.1	242.6	243.0	243.4	243.9
47.5°	226.2	227.6	229.2	230.2	230.7	231.2	231.7	232.3
50°	217.6	219.3	221.0	222.2	222.7	223.1	223.7	224.2
52.5°	209.0	210.7	212.4	213.5	214.0	214.5	215.1	215.6
55°	196.0	197.7	199.4	200.6	201.1	201.5	202.1	202.6
57.5°	182.4	184.4	186.5	187.7	188.2	188.7	189.1	189.6
60°	173.0	175.0	176.9	178.2	179.0	179.6	180.3	181.0
62.5°	163.7	165.7	167.6	169.0	169.7	170.3	171.0	171.7
65°	149.4	151.6	153.7	155.1	155.8	156.5	157.2	157.8
67.5°	135.3	137.5	139.7	141.1	141.8	142.4	143.1	143.8
70°	125.4	127.8	130.0	131.5	132.1	132.7	133.3	133.9
72.5°	116.0	118.3	120.5	122.0	122.6	123.3	124.0	124.7
75°	101.7	104.0	106.5	108.0	108.8	109.6	110.4	111.1
77.5°	88.3	90.7	93.2	94.8	95.6	96.4	97.3	98.1
80°	79.7	82.2	84.8	86.4	87.1	87.8	88.5	89.1
82.5°	71.1	73.8	76.4	78.1	78.8	79.6	80.4	81.1
85°	59.2	61.7	64.3	66.0	66.9	67.8	68.6	69.5
87.5°	52.2	54.9	57.5	59.3	60.1	60.8	61.6	62.5
90°	58.9	62.2	65.6	67.8	68.7	69.7	70.6	71.6
92.5°	56.4	59.7	62.9	65.0	65.7	66.4	67.2	67.9
95°	53.9	57.1	60.3	62.3	63.2	64.2	65.1	66.0
97.5°	52.7	55.0	57.3	58.9	59.8	60.7	61.6	62.5
100°	57.2	57.1	57.0	57.3	58.0	58.8	59.5	60.3
102.5°	115.4	91.7	68.0	56.5	57.2	57.9	58.5	59.3
105°	231.2	234.6	238.1	237.6	233.1	228.7	224.3	219.9
107.5°	276.7	279.4	282.2	284.1	285.3	286.4	287.6	288.7
110°	307.6	309.9	312.2	313.8	315.0	316.1	317.2	318.3



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CATALOG NUMBER: S124DIP-S350D810U930-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	337.4	339.2	341.1	342.7	343.9	345.1	346.3	347.6
115°	382.0	384.2	386.4	387.8	388.3	389.0	389.6	390.1
117.5°	426.7	428.4	430.2	431.4	432.0	432.7	433.3	433.9
120°	454.3	456.3	458.3	459.5	459.9	460.3	460.7	461.1
122.5°	481.6	483.5	485.3	486.5	486.8	487.1	487.5	487.8
125°	519.8	521.9	523.9	525.3	525.9	526.6	527.3	527.9
127.5°	557.3	558.8	560.3	561.3	561.7	562.1	562.6	563.1
130°	580.2	581.9	583.6	584.7	585.2	585.7	586.2	586.8
132.5°	602.8	604.5	606.0	607.1	607.5	607.9	608.3	608.7
135°	633.4	635.1	636.7	638.0	638.8	639.5	640.3	641.2
137.5°	663.1	664.6	666.2	667.2	667.5	667.8	668.2	668.5
140°	681.5	683.1	684.6	685.6	686.2	686.7	687.3	687.9
142.5°	698.7	700.0	701.3	702.1	702.5	703.0	703.3	703.7
145°	723.6	724.2	724.9	725.5	726.2	726.8	727.4	728.1
147.5°	745.4	745.6	745.8	746.1	746.5	747.0	747.4	747.8
150°	759.9	759.9	759.9	759.9	760.1	760.2	760.3	760.5
152.5°	772.6	772.8	773.0	773.1	773.0	772.9	772.8	772.7
155°	789.7	790.3	790.8	790.9	790.4	790.0	789.6	789.2
157.5°	804.5	805.2	805.9	805.9	805.2	804.5	803.7	803.0
160°	813.8	814.7	815.5	815.5	814.7	813.8	813.0	812.1
162.5°	821.5	822.3	823.2	823.1	822.1	821.2	820.3	819.3
165°	832.3	833.4	834.5	834.5	833.2	831.9	830.6	829.3
167.5°	840.2	841.4	842.6	842.5	841.1	839.7	838.3	836.9
170°	845.0	846.1	847.3	847.1	845.7	844.3	842.9	841.5
172.5°	848.1	849.2	850.4	850.1	848.6	847.1	845.5	844.0
175°	851.7	853.0	854.2	854.0	852.3	850.6	848.9	847.2
177.5°	853.1	854.0	854.9	854.7	853.3	852.0	850.6	849.2
180°	852.3	852.3	852.3	852.3	852.3	852.3	852.3	852.3

(END OF REPORT)