

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: P331425-840

Luminaire Tested: **SA2XXDIP-C1005D330U840-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331425-840
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-C1005D330U840-4F0-1E-UDD-D4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 330 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

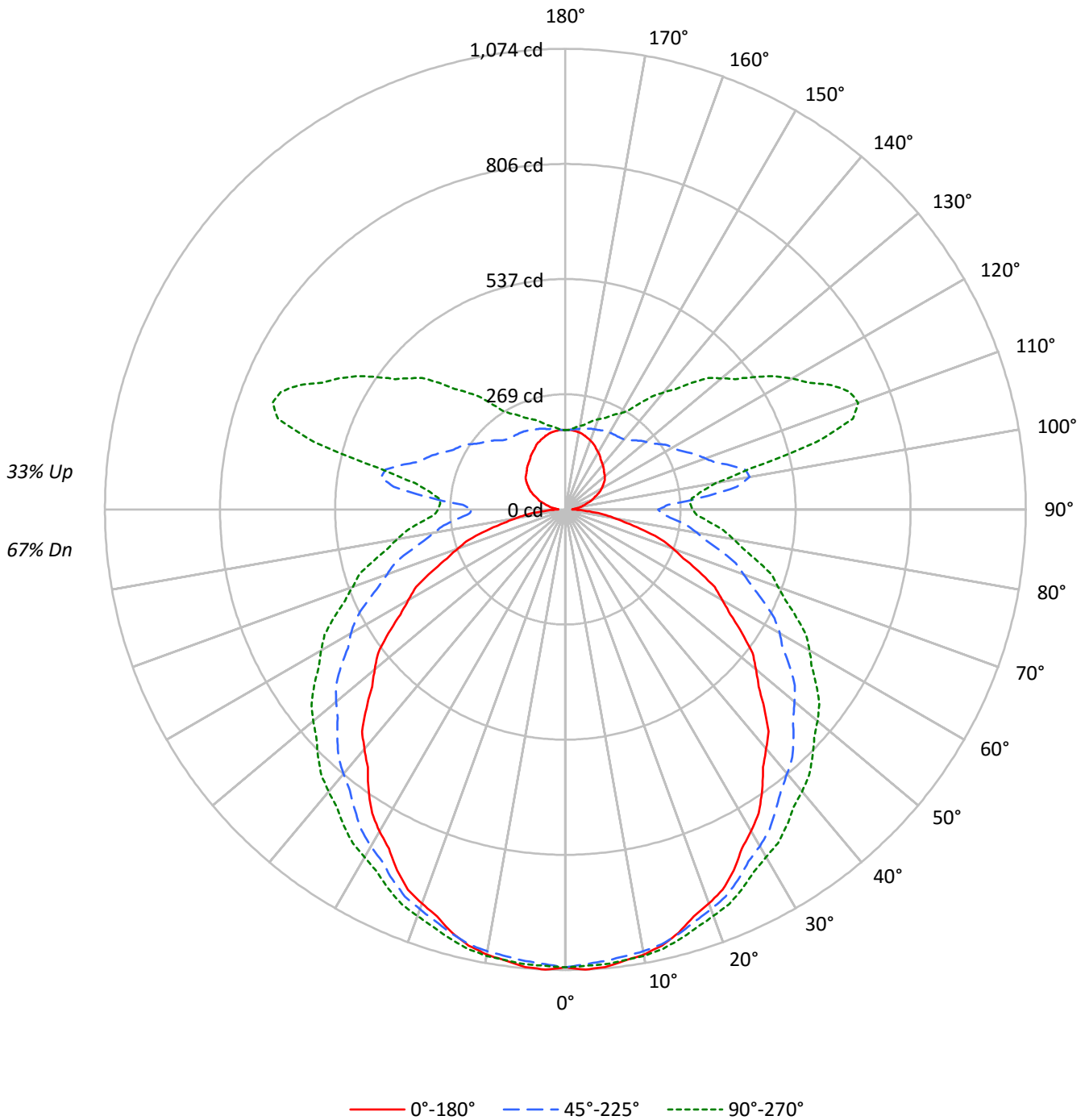
Lumens per Lamp: N/A
Luminaire Lumens: 5366.8 lumens
Efficiency: N/A
Efficacy: 107.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Direct

Input Watts (W): 49.8
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	0
RCR																		
0	111	111	111	111	105	105	105	105	93	93	93	82	82	82	72	72	72	67
1	100	94	90	85	94	89	85	81	79	75	72	69	67	64	61	59	57	53
2	90	81	74	68	84	77	70	65	68	63	58	60	56	52	52	49	46	43
3	82	71	62	56	76	67	59	53	59	53	48	52	47	43	46	42	39	35
4	74	62	53	47	70	59	51	45	52	46	41	46	41	37	40	36	33	30
5	68	55	46	40	64	52	44	38	47	40	35	41	36	31	36	32	28	25
6	63	50	41	34	59	47	39	33	42	35	30	37	32	27	33	28	25	22
7	58	45	36	30	54	42	34	29	38	31	26	34	28	24	30	25	22	19
8	54	41	32	27	50	39	31	25	35	28	23	31	25	21	27	23	19	17
9	50	37	29	24	47	35	28	23	32	25	21	28	23	19	25	21	17	15
10	47	34	26	21	44	32	25	20	29	23	19	26	21	17	23	19	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17241	17241	17241
5°	17327	16597	16534
10°	17217	16106	15925
15°	16980	15587	15284
20°	16681	15031	14669
25°	16384	14494	14107
30°	15966	13945	13546
35°	15544	13412	13150
40°	15099	12958	12754
45°	14678	12551	12415
50°	14226	12185	12082
55°	13750	11789	11742
60°	13168	11380	11382
65°	12566	10901	10957
70°	11886	10385	10497
75°	11021	9881	10071
80°	9646	9362	9643
85°	8334	8915	9308



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.2	1.9
10°-20°	290.2	5.4
20°-30°	439.7	8.2
30°-40°	535.6	10.0
40°-50°	576.2	10.7
50°-60°	559.5	10.4
60°-70°	488.6	9.1
70°-80°	376.1	7.0
80°-90°	254.1	4.7
90°-100°	248.1	4.6
100°-110°	378.7	7.1
110°-120°	351.3	6.5
120°-130°	267.0	5.0
130°-140°	196.4	3.7
140°-150°	137.0	2.6
150°-160°	93.9	1.7
160°-170°	55.3	1.0
170°-180°	18.0	0.3
0°-30°	831.1	15.5
0°-40°	1366.6	25.5
0°-60°	2502.3	46.6
0°-90°	3621.1	67.5
90°-120°	978.1	18.2
90°-150°	1578.6	29.4
90°-180°	1746.0	32.5
0°-180°	5366.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1068	1068	1068	1068	1068	
5°	1071	1066	1057	1066	1065	102
15°	1022	1024	1024	1038	1037	288
25°	929	940	953	971	976	427
35°	800	827	856	889	901	500
45°	656	699	752	798	816	506
55°	503	560	639	693	715	450
65°	344	420	511	572	594	341
75°	190	278	376	440	463	201
85°	56	152	251	313	337	60
90°	16	111	216	275	296	11
95°	25	117	318	287	296	23
105°	51	120	398	658	606	55
115°	83	123	314	594	686	82
125°	110	132	265	463	538	98
135°	127	152	227	359	418	99
145°	143	165	209	269	301	90
155°	163	176	203	230	239	75
165°	178	183	194	206	209	50
175°	185	185	187	189	189	18
180°	186	186	186	186	186	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8
2.5°	1074.1	1073.3	1072.4	1071.6	1070.8	1069.3	1067.4	1065.5	1063.6	1061.7	1063.1
5°	1071.0	1070.0	1068.9	1067.8	1066.8	1065.3	1063.3	1061.2	1059.1	1057.0	1059.1
7.5°	1061.4	1060.7	1060.0	1059.3	1058.6	1057.5	1055.9	1054.3	1052.8	1051.2	1053.6
10°	1054.0	1053.3	1052.6	1051.9	1051.2	1050.4	1049.4	1048.2	1047.2	1046.2	1048.9
12.5°	1041.6	1041.7	1041.9	1042.0	1042.1	1041.8	1041.1	1040.3	1039.6	1038.7	1041.6
15°	1021.5	1022.2	1022.8	1023.5	1024.2	1024.5	1024.5	1024.5	1024.5	1024.5	1027.6
17.5°	995.4	996.9	998.4	999.8	1001.2	1002.5	1003.6	1004.7	1005.8	1006.9	1010.2
20°	978.2	979.9	981.6	983.3	985.0	986.5	988.0	989.3	990.7	992.1	995.8
22.5°	959.6	961.5	963.5	965.5	967.6	969.5	971.4	973.3	975.2	977.1	981.0
25°	928.6	931.0	933.4	935.8	938.3	941.0	944.0	947.2	950.3	953.3	957.5
27.5°	891.4	895.3	899.3	903.2	907.2	910.9	914.5	918.2	921.8	925.5	930.7
30°	866.7	871.1	875.7	880.1	884.5	889.1	893.5	898.0	902.4	907.0	912.4
32.5°	839.4	844.4	849.5	854.5	859.5	864.6	870.0	875.3	880.6	885.9	892.2
35°	800.1	806.0	811.8	817.7	823.5	829.7	836.3	842.7	849.3	855.9	863.4
37.5°	757.4	764.2	770.9	777.6	784.4	791.9	800.4	808.9	817.4	825.9	834.2
40°	728.9	736.5	744.1	751.6	759.2	767.6	776.9	786.2	795.5	804.8	813.7
42.5°	701.8	709.2	716.8	724.4	732.0	741.0	751.7	762.4	773.1	783.8	793.5
45°	656.2	665.5	674.8	684.1	693.4	704.0	716.1	728.1	740.1	752.1	762.9
47.5°	611.4	621.5	631.6	641.7	651.8	663.9	678.0	692.1	706.2	720.2	731.4
50°	580.4	591.1	601.7	612.4	623.0	636.1	651.6	667.0	682.5	698.0	709.7
52.5°	550.7	561.9	573.1	584.3	595.5	609.3	625.5	641.9	658.1	674.5	686.4
55°	503.0	515.3	527.8	540.2	552.5	567.6	585.5	603.4	621.3	639.1	651.6
57.5°	456.0	469.9	483.8	497.9	511.8	527.9	546.1	564.3	582.6	600.8	614.1
60°	422.5	437.3	452.1	466.9	481.7	498.9	518.5	538.1	557.6	577.2	590.4
62.5°	392.8	408.1	423.4	438.8	454.1	471.6	491.2	510.8	530.5	550.1	563.9
65°	343.6	360.4	377.3	394.2	411.0	429.6	449.9	470.1	490.4	510.7	524.8
67.5°	298.4	316.0	333.6	351.2	368.8	388.0	408.8	429.6	450.3	471.1	485.3
70°	266.2	284.1	301.9	319.8	337.7	357.3	378.7	400.0	421.3	442.6	457.4
72.5°	236.5	254.9	273.4	291.8	310.2	330.2	351.8	373.4	395.1	416.7	431.1
75°	190.4	209.6	228.8	248.1	267.4	288.0	310.0	332.0	354.1	376.1	390.8
77.5°	145.8	165.9	186.1	206.2	226.4	247.6	270.0	292.4	314.7	337.1	351.8
80°	116.0	137.0	158.0	179.0	200.0	221.7	244.0	266.4	288.7	311.0	325.5
82.5°	91.3	112.0	132.7	153.4	174.1	195.8	218.4	241.1	263.7	286.3	300.7
85°	55.7	77.1	98.4	119.7	141.0	162.7	184.7	206.7	228.7	250.7	265.2
87.5°	30.4	51.1	71.9	92.5	113.2	134.6	157.0	179.6	202.0	224.1	238.0
90°	15.9	36.9	58.3	78.9	99.6	121.6	145.4	169.9	194.1	216.4	229.8
92.5°	18.6	39.1	60.2	80.4	101.4	124.6	153.9	186.4	217.7	239.5	245.8
95°	24.8	42.4	62.2	81.6	103.4	130.4	167.4	219.1	281.1	317.8	313.5
97.5°	31.2	47.5	65.6	84.8	105.8	132.6	173.0	236.1	324.7	403.4	427.9
100°	38.3	52.1	68.1	86.4	106.3	132.3	170.5	233.3	329.6	436.7	500.8
102.5°	43.6	56.0	70.9	88.3	107.2	132.4	168.6	226.0	316.1	429.4	522.6
105°	51.3	62.7	75.1	90.5	108.3	132.2	166.8	216.5	293.3	397.5	504.4
107.5°	61.2	70.4	80.8	93.7	109.5	132.0	165.4	210.3	276.1	364.6	460.0
110°	66.9	75.1	84.2	95.7	110.1	132.3	164.8	207.3	267.7	347.4	432.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	73.1	80.3	88.6	98.7	111.7	133.2	164.3	204.6	260.2	332.4	409.9
115°	82.9	88.5	94.4	102.5	113.4	132.6	163.5	200.7	250.7	314.1	380.8
117.5°	91.5	95.4	100.0	106.2	115.6	134.0	162.5	197.2	241.9	298.0	357.3
120°	97.8	100.6	104.1	108.7	117.1	134.7	162.4	195.4	236.7	288.6	343.6
122.5°	103.8	105.4	108.2	112.2	119.9	136.9	162.9	193.7	232.1	280.0	331.0
125°	110.2	111.2	113.3	117.6	124.7	140.3	164.1	191.2	224.3	265.3	311.3
127.5°	116.4	117.5	120.2	124.5	131.0	145.5	166.9	190.3	218.3	253.0	293.0
130°	120.2	121.2	124.4	129.1	135.9	149.4	169.1	189.8	214.9	244.9	281.0
132.5°	123.5	124.9	128.5	133.4	140.5	153.1	170.6	189.3	211.4	237.2	269.8
135°	127.1	128.6	132.9	138.3	146.4	158.1	173.0	188.9	206.6	227.2	254.8
137.5°	132.0	133.6	137.8	143.5	151.6	161.6	174.3	187.5	202.0	218.1	241.6
140°	135.7	136.8	140.8	146.1	153.6	163.1	174.4	186.2	199.0	212.9	233.8
142.5°	139.5	140.2	143.9	149.3	156.4	165.0	175.6	186.5	197.9	210.5	228.1
145°	143.4	144.9	148.5	153.8	161.0	168.7	178.4	188.4	198.3	209.0	222.6
147.5°	149.5	150.5	153.9	158.9	164.8	171.8	180.9	189.7	198.6	207.8	218.0
150°	153.4	154.5	157.3	162.0	167.3	173.8	182.0	190.2	198.3	206.9	215.5
152.5°	157.4	157.9	160.8	164.8	170.0	175.7	183.1	190.5	197.8	205.5	213.5
155°	163.1	163.4	165.5	169.5	173.4	178.7	184.8	190.9	196.9	203.0	209.8
157.5°	167.7	168.1	169.9	173.3	176.4	180.9	186.0	190.9	195.3	200.5	206.3
160°	170.9	171.3	172.7	175.5	178.4	182.4	186.6	190.9	194.5	198.7	203.7
162.5°	174.1	173.8	175.3	177.5	180.2	183.2	186.9	190.6	193.6	197.3	201.5
165°	177.7	177.3	178.0	180.2	182.0	184.1	187.3	189.9	192.0	194.5	197.6
167.5°	180.7	180.3	180.9	182.3	183.6	184.9	187.2	189.3	190.4	192.0	194.0
170°	182.7	182.0	182.4	183.4	184.1	185.2	186.9	188.7	189.5	190.6	192.0
172.5°	183.8	183.4	183.2	184.3	184.7	185.5	186.7	187.9	188.3	188.8	190.0
175°	185.2	184.8	184.5	185.2	185.2	185.5	186.2	186.9	186.6	186.9	187.3
177.5°	185.8	185.2	185.0	185.5	185.5	185.5	185.8	186.4	185.8	185.5	185.8
180°	185.5	185.5	185.5	185.5	185.5	185.5	185.5	185.5	185.5	185.5	185.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8
2.5°	1064.4	1065.8	1067.2	1067.6	1067.0	1066.5	1065.9	1065.4
5°	1061.2	1063.3	1065.3	1066.1	1065.8	1065.5	1065.1	1064.8
7.5°	1056.1	1058.6	1061.1	1062.2	1061.8	1061.5	1061.1	1060.8
10°	1051.7	1054.5	1057.2	1058.4	1058.0	1057.7	1057.4	1057.0
12.5°	1044.3	1047.0	1049.8	1051.0	1050.7	1050.3	1050.0	1049.7
15°	1030.8	1033.8	1036.9	1038.3	1037.9	1037.6	1037.2	1036.9
17.5°	1013.4	1016.6	1019.9	1021.5	1021.5	1021.5	1021.5	1021.5
20°	999.6	1003.4	1007.1	1009.1	1009.1	1009.1	1009.1	1009.1
22.5°	984.7	988.6	992.3	994.5	995.0	995.6	996.1	996.7
25°	961.6	965.7	969.9	972.4	973.5	974.5	975.5	976.5
27.5°	935.9	941.2	946.4	949.4	950.2	950.9	951.7	952.4
30°	918.0	923.4	929.0	932.2	933.2	934.2	935.3	936.3
32.5°	898.6	904.8	911.2	915.2	917.2	919.0	920.9	922.7
35°	871.0	878.6	886.2	891.1	893.5	896.0	898.4	900.7
37.5°	842.6	851.0	859.4	864.8	867.4	870.0	872.5	875.0
40°	822.6	831.6	840.5	846.6	849.7	852.7	855.9	859.0
42.5°	803.2	813.0	822.8	829.2	832.3	835.5	838.5	841.6
45°	773.5	784.2	794.8	801.8	805.3	808.7	812.1	815.6
47.5°	742.6	753.7	764.9	772.3	776.1	779.9	783.7	787.5
50°	721.3	733.1	744.8	752.6	756.3	760.0	763.9	767.6
52.5°	698.4	710.3	722.4	730.3	734.4	738.5	742.6	746.6
55°	664.0	676.3	688.7	697.1	701.6	706.1	710.5	715.0
57.5°	627.5	640.9	654.2	663.1	667.6	672.2	676.7	681.3
60°	603.4	616.5	629.5	638.5	643.3	648.1	653.0	657.7
62.5°	577.8	591.7	605.6	614.8	619.4	623.9	628.4	633.0
65°	539.0	553.0	567.1	576.4	580.9	585.3	589.9	594.3
67.5°	499.6	513.8	528.1	537.6	542.2	546.8	551.6	556.2
70°	472.2	487.0	501.8	511.2	515.3	519.5	523.6	527.8
72.5°	445.7	460.2	474.6	484.4	489.4	494.3	499.3	504.2
75°	405.7	420.4	435.3	444.8	449.3	453.8	458.3	462.7
77.5°	366.5	381.2	396.0	405.8	410.5	415.4	420.2	425.0
80°	339.9	354.5	368.9	378.5	383.3	388.1	392.9	397.8
82.5°	315.2	329.6	344.1	353.6	358.1	362.6	367.2	371.7
85°	279.6	294.1	308.5	318.1	323.0	327.8	332.5	337.4
87.5°	252.0	265.9	280.0	289.3	293.8	298.1	302.6	306.9
90°	243.2	256.3	270.7	280.0	284.2	288.3	292.5	296.5
92.5°	251.3	260.2	270.7	277.3	281.2	284.2	288.6	292.2
95°	297.6	288.9	287.0	287.7	287.2	288.5	291.5	296.0
97.5°	408.3	381.3	355.5	338.1	325.1	320.3	319.2	320.2
100°	505.9	474.4	438.3	403.3	377.6	366.0	359.4	356.8
102.5°	567.2	569.8	546.4	508.8	480.4	458.0	448.9	443.9
105°	590.7	643.1	659.7	655.9	637.5	619.1	607.6	606.4
107.5°	550.2	622.5	671.2	696.1	702.7	705.3	706.0	703.1
110°	518.6	593.4	650.2	686.8	705.9	716.5	723.5	726.9



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CATALOG NUMBER: SA2XXDIP-C1005D330U840-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	488.8	561.1	620.9	661.9	686.9	702.1	712.0	717.6
115°	450.0	515.2	572.3	616.1	645.2	665.4	678.4	685.5
117.5°	417.5	475.8	528.5	569.8	599.1	620.0	633.2	639.4
120°	399.2	453.1	500.6	539.7	568.5	589.1	603.2	610.5
122.5°	383.5	433.4	478.6	514.2	539.9	559.6	572.0	578.2
125°	359.5	405.6	446.3	479.2	502.9	519.6	531.6	537.6
127.5°	335.8	377.6	415.7	446.2	467.3	483.0	493.7	499.1
130°	320.6	359.6	396.1	425.1	445.4	460.2	470.1	475.7
132.5°	305.8	342.2	376.1	403.5	423.5	438.4	447.8	453.0
135°	285.2	315.9	346.7	371.6	389.8	404.2	413.4	417.7
137.5°	266.8	292.8	317.8	339.5	355.9	368.4	376.4	380.8
140°	255.3	277.9	299.8	319.3	332.9	344.2	351.5	355.8
142.5°	246.6	265.6	284.1	300.3	313.0	323.2	329.7	331.9
145°	235.7	249.5	262.7	274.9	285.2	293.0	298.2	301.0
147.5°	227.7	237.3	246.2	254.4	262.3	267.9	271.1	272.7
150°	224.1	232.0	239.4	245.8	251.2	255.5	257.6	258.0
152.5°	221.0	228.2	234.6	240.1	244.4	248.0	249.6	249.7
155°	216.6	222.3	227.6	231.6	235.5	238.0	239.4	238.7
157.5°	211.6	216.3	220.8	223.9	226.6	228.7	229.3	229.3
160°	208.3	212.3	216.2	218.7	221.3	223.0	223.4	223.4
162.5°	205.2	208.6	212.0	213.9	216.4	217.6	217.9	217.6
165°	200.6	203.0	205.5	206.9	208.3	209.8	209.8	209.4
167.5°	196.0	197.9	199.7	201.0	201.6	202.4	202.3	201.9
170°	193.8	194.8	196.2	196.9	197.3	198.3	198.0	197.3
172.5°	191.2	192.0	193.1	193.5	193.9	194.4	194.0	193.6
175°	188.4	188.7	189.1	189.5	189.5	189.9	189.5	188.7
177.5°	186.4	186.4	186.7	186.7	186.7	186.7	186.4	185.8
180°	185.5	185.5	185.5	185.5	185.5	185.5	185.5	185.5

(END OF REPORT)