

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: P331405-940

Luminaire Tested: **SA2XXDIP-C865D925U940-4F0-1E-UDD-D**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331405-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C865D925U940-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 925 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

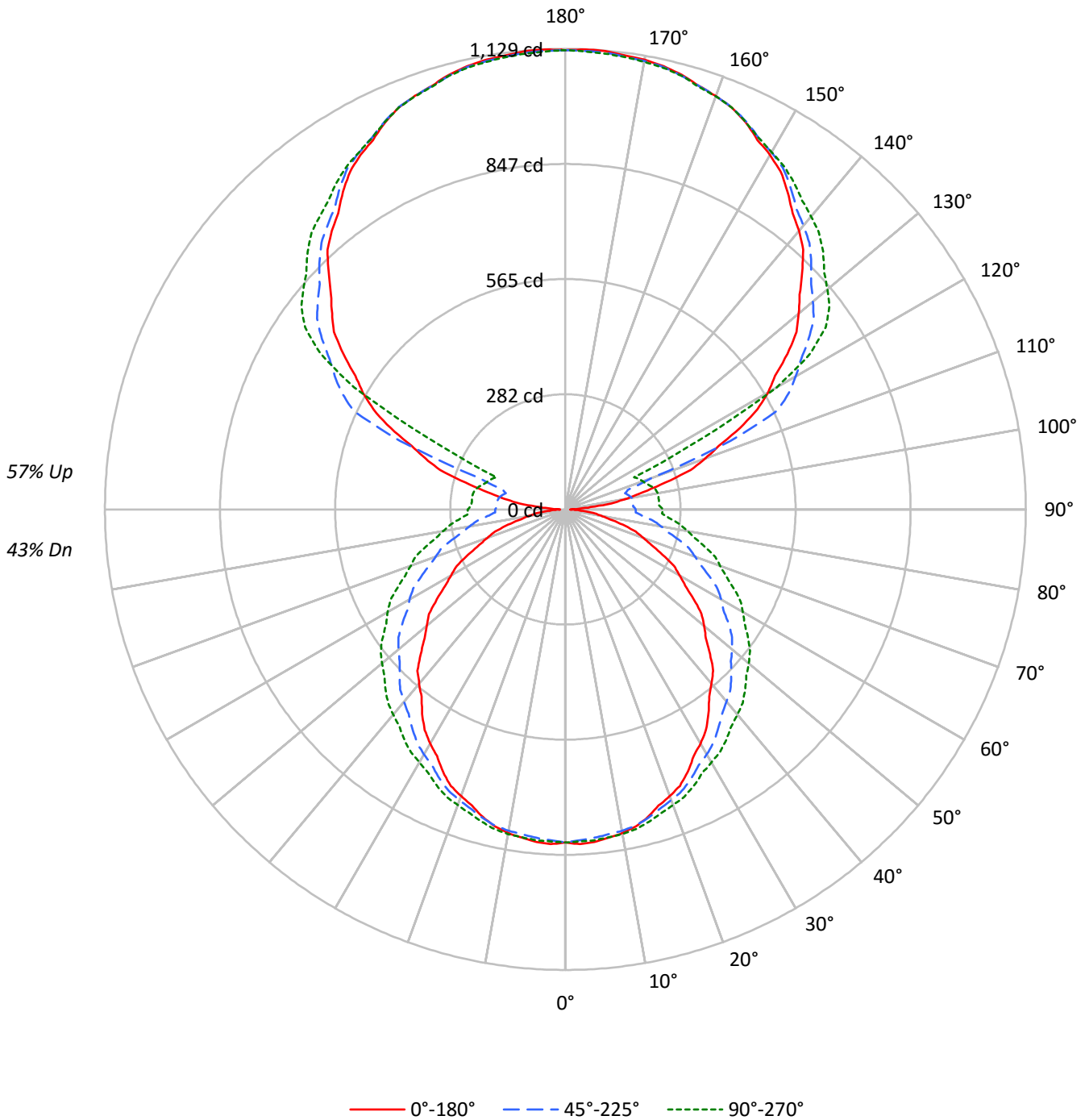
Lumens per Lamp: N/A
Luminaire Lumens: 6415.9 lumens
Efficiency: N/A
Efficacy: 106.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

Input Watts (W): 60.5
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	0
RCR																		
0	106	106	106	106	96	96	96	96	80	80	80	64	64	64	50	50	50	43
1	95	90	86	82	86	82	79	75	68	65	63	54	52	51	42	41	39	34
2	86	78	71	66	78	71	65	61	59	54	51	47	44	41	36	34	32	27
3	78	68	60	54	71	62	55	50	51	46	42	41	37	34	32	29	27	22
4	71	60	52	45	65	55	48	42	45	40	35	36	32	29	28	25	23	19
5	65	53	45	39	59	49	41	36	40	35	30	32	28	25	25	22	20	16
6	60	47	39	33	54	44	36	31	36	30	26	29	25	22	23	20	17	14
7	55	43	35	29	50	39	32	27	33	27	23	26	22	19	21	17	15	12
8	51	39	31	25	47	36	29	24	30	24	20	24	20	17	19	16	13	11
9	48	35	28	22	43	32	26	21	27	22	18	22	18	15	17	14	12	10
10	44	32	25	20	40	30	23	19	25	20	16	20	16	13	16	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13183	13183	13183
5°	13247	12690	12640
10°	13163	12315	12177
15°	12982	11917	11686
20°	12752	11492	11215
25°	12527	11082	10786
30°	12206	10661	10357
35°	11884	10253	10054
40°	11544	9907	9750
45°	11222	9597	9493
50°	10875	9317	9238
55°	10513	9015	8977
60°	10070	8702	8703
65°	9607	8336	8376
70°	9087	7940	8025
75°	8422	7553	7701
80°	7376	7159	7372
85°	6374	6817	7118



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.4	1.2
10°-20°	221.8	3.5
20°-30°	336.2	5.2
30°-40°	409.5	6.4
40°-50°	440.5	6.9
50°-60°	427.8	6.7
60°-70°	373.5	5.8
70°-80°	287.6	4.5
80°-90°	195.8	3.1
90°-100°	170.5	2.7
100°-110°	234.8	3.7
110°-120°	432.1	6.7
120°-130°	643.3	10.0
130°-140°	661.1	10.3
140°-150°	603.1	9.4
150°-160°	482.8	7.5
160°-170°	311.1	4.8
170°-180°	107.1	1.7
0°-30°	635.4	9.9
0°-40°	1044.8	16.3
0°-60°	1913.1	29.8
0°-90°	2770.0	43.2
90°-120°	837.4	13.1
90°-150°	2744.9	42.8
90°-180°	3646.0	56.8
0°-180°	6415.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	816	816	816	816	816	
5°	819	815	808	815	814	78
15°	781	783	783	793	793	220
25°	710	718	729	742	747	326
35°	612	632	654	679	689	382
45°	502	534	575	610	624	387
55°	385	428	489	530	547	344
65°	263	321	390	437	454	261
75°	146	212	288	336	354	154
85°	43	116	192	240	258	46
90°	13	90	172	222	240	10
95°	62	94	168	215	230	72
105°	254	300	151	200	218	271
115°	473	502	574	248	186	465
125°	664	677	728	765	779	593
135°	820	834	853	884	894	634
145°	950	950	963	976	978	595
155°	1046	1040	1049	1053	1047	482
165°	1103	1098	1100	1105	1100	311
175°	1128	1123	1124	1129	1121	107
180°	1126	1126	1126	1126	1126	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	816.5	816.5	816.5	816.5	816.5	816.5	816.5	816.5	816.5	816.5	816.5
2.5°	821.2	820.6	819.9	819.3	818.7	817.6	816.1	814.7	813.2	811.7	812.8
5°	818.8	818.1	817.3	816.5	815.6	814.5	812.9	811.3	809.8	808.2	809.8
7.5°	811.5	810.9	810.4	809.9	809.4	808.5	807.3	806.1	804.9	803.7	805.6
10°	805.8	805.3	804.8	804.2	803.7	803.1	802.3	801.5	800.7	799.9	802.0
12.5°	796.3	796.5	796.6	796.7	796.7	796.5	795.9	795.3	794.8	794.2	796.3
15°	781.0	781.5	782.0	782.6	783.0	783.3	783.3	783.3	783.3	783.3	785.7
17.5°	761.1	762.1	763.3	764.4	765.4	766.4	767.3	768.1	769.0	769.8	772.3
20°	747.8	749.1	750.5	751.8	753.0	754.3	755.3	756.3	757.4	758.5	761.3
22.5°	733.6	735.1	736.6	738.2	739.7	741.2	742.7	744.1	745.6	747.1	750.0
25°	710.0	711.8	713.6	715.5	717.3	719.4	721.8	724.2	726.5	728.9	732.0
27.5°	681.5	684.6	687.5	690.5	693.6	696.4	699.2	702.0	704.8	707.6	711.6
30°	662.6	666.0	669.5	672.9	676.3	679.8	683.1	686.5	690.0	693.4	697.6
32.5°	641.8	645.6	649.4	653.4	657.2	661.1	665.1	669.2	673.2	677.3	682.2
35°	611.7	616.2	620.7	625.2	629.6	634.4	639.4	644.4	649.3	654.3	660.1
37.5°	579.1	584.2	589.4	594.5	599.7	605.5	612.0	618.5	624.9	631.4	637.8
40°	557.3	563.1	568.9	574.7	580.4	586.9	594.0	601.1	608.2	615.3	622.1
42.5°	536.5	542.2	548.0	553.8	559.6	566.6	574.7	582.9	591.0	599.2	606.6
45°	501.7	508.8	515.9	523.0	530.1	538.2	547.4	556.7	565.9	575.1	583.2
47.5°	467.3	475.1	482.9	490.6	498.3	507.6	518.4	529.1	539.9	550.7	559.2
50°	443.7	451.8	460.0	468.1	476.4	486.3	498.1	510.0	521.8	533.7	542.6
52.5°	421.0	429.5	438.2	446.7	455.3	465.8	478.3	490.7	503.2	515.7	524.8
55°	384.6	394.0	403.5	413.0	422.4	434.0	447.6	461.4	475.0	488.7	498.1
57.5°	348.6	359.3	370.0	380.6	391.3	403.6	417.5	431.5	445.4	459.3	469.6
60°	323.1	334.3	345.6	357.0	368.3	381.4	396.4	411.3	426.3	441.4	451.4
62.5°	300.3	312.0	323.8	335.5	347.2	360.6	375.6	390.6	405.6	420.5	431.1
65°	262.7	275.5	288.5	301.3	314.2	328.4	343.9	359.4	375.0	390.5	401.3
67.5°	228.1	241.6	255.0	268.5	282.0	296.7	312.5	328.4	344.3	360.2	371.0
70°	203.5	217.2	230.9	244.5	258.2	273.2	289.5	305.8	322.1	338.4	349.7
72.5°	180.8	194.9	209.0	223.1	237.2	252.4	269.0	285.5	302.0	318.5	329.7
75°	145.5	160.2	175.0	189.8	204.5	220.3	237.0	253.9	270.7	287.5	298.8
77.5°	111.5	126.9	142.3	157.7	173.1	189.3	206.4	223.6	240.6	257.7	268.9
80°	88.7	104.8	120.8	136.9	152.9	169.4	186.5	203.7	220.7	237.8	248.9
82.5°	69.8	85.6	101.5	117.3	133.1	149.7	167.0	184.3	201.6	218.9	230.0
85°	42.6	58.9	75.2	91.5	107.8	124.4	141.2	158.0	174.9	191.7	202.8
87.5°	23.4	39.4	55.5	71.6	87.7	104.2	121.4	138.5	155.6	172.7	183.6
90°	12.7	29.9	47.2	64.4	81.6	99.3	117.6	135.9	154.2	172.5	183.9
92.5°	27.4	41.4	55.4	69.4	83.4	98.9	115.8	132.7	149.6	166.6	177.4
95°	62.4	68.8	75.2	81.6	87.9	99.7	116.7	133.8	150.8	167.8	178.7
97.5°	113.3	107.5	101.7	95.9	90.0	96.1	114.1	132.2	150.3	168.4	178.9
100°	152.4	137.3	122.3	107.3	92.2	93.5	111.4	129.1	147.0	164.8	175.9
102.5°	194.5	198.1	201.8	205.4	209.0	205.2	193.7	182.3	170.9	159.4	170.9
105°	253.5	266.5	279.6	292.7	305.7	294.4	258.6	222.9	187.2	151.4	162.6
107.5°	322.2	332.6	343.1	353.6	364.1	346.3	300.1	254.0	207.8	161.6	168.4
110°	365.5	374.6	383.6	392.7	401.7	386.6	347.1	307.7	268.3	228.9	219.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	407.2	415.0	422.8	430.5	438.4	441.9	441.2	440.6	439.9	439.3	381.7
115°	473.1	478.9	484.9	490.9	496.9	508.0	524.4	540.7	557.1	573.5	497.6
117.5°	530.7	535.9	541.3	546.6	552.0	561.7	575.7	589.8	603.8	617.9	605.4
120°	573.6	577.4	581.1	585.0	588.7	597.4	611.3	625.0	638.8	652.6	662.1
122.5°	610.1	613.4	616.7	619.9	623.2	631.6	645.1	658.4	671.9	685.3	693.8
125°	664.5	666.8	669.1	671.5	673.9	681.0	692.9	704.7	716.6	728.3	736.7
127.5°	714.8	717.1	719.5	721.8	724.2	730.0	739.4	748.8	758.0	767.4	775.8
130°	746.7	749.4	752.0	754.7	757.2	762.3	769.8	777.4	784.9	792.4	800.7
132.5°	779.3	781.5	783.7	785.9	788.1	792.3	798.5	804.9	811.1	817.3	825.1
135°	820.5	823.3	826.3	829.1	832.1	835.6	839.9	844.2	848.4	852.7	860.0
137.5°	863.3	865.3	867.3	869.2	871.2	873.7	876.7	879.7	882.7	885.7	892.3
140°	891.4	892.5	893.7	894.8	896.1	897.9	900.4	902.9	905.4	907.9	913.8
142.5°	914.8	915.8	916.9	917.9	918.9	920.6	923.0	925.4	927.8	930.1	935.0
145°	950.4	950.2	950.0	949.9	949.7	951.1	954.2	957.3	960.4	963.4	966.3
147.5°	982.5	981.8	981.1	980.4	979.7	980.9	983.9	987.0	990.1	993.1	994.3
150°	1003.4	1002.1	1000.8	999.5	998.3	999.1	1002.0	1004.9	1007.8	1010.7	1011.7
152.5°	1020.9	1019.5	1018.1	1016.7	1015.3	1015.9	1018.7	1021.5	1024.2	1027.0	1028.1
155°	1046.5	1044.9	1043.2	1041.6	1040.0	1040.3	1042.4	1044.6	1046.8	1048.9	1050.0
157.5°	1066.5	1065.1	1063.8	1062.4	1061.0	1061.1	1062.7	1064.2	1065.7	1067.2	1068.4
160°	1078.3	1077.2	1076.1	1075.0	1073.9	1073.9	1075.0	1076.1	1077.2	1078.3	1079.3
162.5°	1088.7	1087.6	1086.5	1085.4	1084.3	1084.2	1085.2	1086.1	1087.1	1088.1	1089.2
165°	1102.7	1101.6	1100.5	1099.4	1098.3	1098.1	1098.6	1099.1	1099.7	1100.3	1101.5
167.5°	1113.1	1112.1	1111.0	1109.8	1108.8	1108.5	1109.0	1109.5	1110.0	1110.5	1111.8
170°	1119.0	1117.8	1116.8	1115.7	1114.6	1114.3	1114.6	1115.0	1115.4	1115.7	1117.0
172.5°	1122.8	1121.8	1120.7	1119.6	1118.6	1118.2	1118.6	1118.9	1119.3	1119.6	1120.9
175°	1127.9	1126.7	1125.4	1124.1	1122.8	1122.4	1122.8	1123.1	1123.5	1123.8	1125.2
177.5°	1128.7	1127.7	1126.8	1125.7	1124.7	1124.3	1124.4	1124.5	1124.7	1124.8	1125.9
180°	1125.5	1125.5	1125.5	1125.5	1125.5	1125.5	1125.5	1125.5	1125.5	1125.5	1125.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	816.5	816.5	816.5	816.5	816.5	816.5	816.5	816.5
2.5°	813.8	814.8	815.9	816.3	815.8	815.4	814.9	814.6
5°	811.3	812.9	814.5	815.1	814.8	814.6	814.3	814.0
7.5°	807.4	809.3	811.3	812.1	811.8	811.5	811.3	811.0
10°	804.1	806.2	808.3	809.2	809.0	808.7	808.4	808.2
12.5°	798.4	800.5	802.6	803.5	803.3	803.0	802.7	802.5
15°	788.0	790.4	792.8	793.8	793.5	793.3	793.0	792.8
17.5°	774.8	777.2	779.7	781.0	781.0	781.0	781.0	781.0
20°	764.3	767.1	770.0	771.5	771.5	771.5	771.5	771.5
22.5°	752.9	755.8	758.7	760.4	760.7	761.2	761.6	762.1
25°	735.2	738.3	741.5	743.5	744.2	745.0	745.8	746.6
27.5°	715.6	719.6	723.5	725.9	726.5	727.0	727.6	728.2
30°	701.8	706.0	710.2	712.7	713.5	714.3	715.1	715.9
32.5°	687.0	691.8	696.6	699.8	701.2	702.6	704.0	705.4
35°	665.9	671.7	677.5	681.3	683.1	685.0	686.8	688.7
37.5°	644.2	650.6	657.0	661.2	663.2	665.1	667.1	669.1
40°	628.9	635.8	642.7	647.2	649.6	651.9	654.3	656.7
42.5°	614.1	621.6	629.1	634.0	636.3	638.7	641.1	643.5
45°	591.4	599.5	607.7	613.1	615.7	618.3	621.0	623.6
47.5°	567.8	576.2	584.8	590.5	593.3	596.3	599.1	602.1
50°	551.5	560.4	569.4	575.3	578.2	581.1	584.0	586.9
52.5°	534.0	543.1	552.2	558.4	561.5	564.6	567.7	570.8
55°	507.7	517.1	526.6	533.0	536.4	539.8	543.2	546.6
57.5°	479.7	489.9	500.2	507.0	510.4	513.9	517.4	520.8
60°	461.4	471.4	481.3	488.1	491.9	495.5	499.2	502.9
62.5°	441.8	452.4	463.0	470.1	473.5	477.0	480.5	483.9
65°	412.1	422.8	433.6	440.7	444.1	447.5	450.9	454.3
67.5°	381.9	392.8	403.8	411.0	414.6	418.1	421.7	425.3
70°	361.1	372.3	383.6	390.8	394.0	397.2	400.4	403.5
72.5°	340.7	351.8	362.9	370.3	374.2	377.9	381.7	385.5
75°	310.1	321.5	332.8	340.1	343.6	347.0	350.4	353.8
77.5°	280.3	291.5	302.7	310.2	313.9	317.5	321.3	324.9
80°	259.9	271.0	282.0	289.4	293.0	296.8	300.4	304.1
82.5°	241.0	252.0	263.1	270.4	273.8	277.2	280.7	284.2
85°	213.7	224.8	235.9	243.3	246.9	250.6	254.2	258.0
87.5°	194.5	205.5	216.3	223.6	226.9	230.4	233.8	237.3
90°	195.3	206.8	218.2	225.6	229.2	232.6	236.2	239.7
92.5°	188.2	198.9	209.6	216.8	220.2	223.5	226.9	230.2
95°	189.7	200.5	211.4	218.4	221.3	224.3	227.3	230.2
97.5°	189.3	199.7	210.3	217.1	220.4	223.7	227.0	230.4
100°	187.1	198.3	209.5	216.7	219.9	223.2	226.4	229.7
102.5°	182.3	193.6	205.0	212.4	215.8	219.2	222.7	226.0
105°	173.8	185.0	196.2	203.6	207.2	210.9	214.5	218.1
107.5°	175.2	182.0	188.9	194.0	197.7	201.3	204.9	208.5
110°	209.6	199.8	190.2	187.2	190.7	194.4	198.0	201.6



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CATALOG NUMBER: SA2XXDIP-C865D925U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	324.0	266.4	208.8	181.7	185.2	188.7	192.2	195.6
115°	421.7	345.8	269.8	226.9	216.7	206.5	196.4	186.3
117.5°	592.9	580.4	567.9	541.6	501.5	461.3	421.2	381.0
120°	671.6	681.2	690.7	684.7	663.2	641.6	620.1	598.5
122.5°	702.2	710.7	719.2	722.2	720.0	717.7	715.4	713.2
125°	745.1	753.5	761.9	767.5	770.4	773.3	776.2	779.2
127.5°	784.2	792.6	800.9	806.3	808.7	811.1	813.6	816.0
130°	809.0	817.3	825.5	830.7	832.6	834.6	836.4	838.4
132.5°	832.9	840.7	848.6	853.4	855.3	857.2	859.2	861.0
135°	867.3	874.7	882.0	886.5	888.2	890.0	891.7	893.5
137.5°	898.9	905.5	912.1	916.1	917.2	918.4	919.5	920.7
140°	919.6	925.5	931.3	934.6	935.2	935.9	936.6	937.3
142.5°	939.9	944.8	949.6	952.3	952.7	953.1	953.6	954.1
145°	969.1	972.0	974.8	976.4	976.9	977.2	977.7	978.0
147.5°	995.4	996.5	997.6	998.2	998.1	997.9	997.8	997.6
150°	1012.8	1014.0	1015.0	1015.1	1014.2	1013.3	1012.4	1011.5
152.5°	1029.1	1030.2	1031.3	1031.3	1030.0	1028.9	1027.7	1026.4
155°	1051.1	1052.2	1053.3	1053.1	1051.7	1050.2	1048.7	1047.3
157.5°	1069.6	1070.9	1072.1	1072.0	1070.6	1069.2	1067.7	1066.4
160°	1080.4	1081.6	1082.6	1082.5	1081.2	1080.0	1078.7	1077.5
162.5°	1090.5	1091.7	1093.0	1092.8	1091.3	1089.7	1088.2	1086.5
165°	1102.8	1104.0	1105.3	1105.3	1104.0	1102.8	1101.5	1100.3
167.5°	1113.0	1114.3	1115.6	1115.4	1113.7	1112.1	1110.5	1108.8
170°	1118.3	1119.5	1120.8	1120.6	1119.0	1117.3	1115.7	1114.1
172.5°	1122.1	1123.5	1124.7	1124.5	1122.8	1121.2	1119.6	1118.0
175°	1126.4	1127.7	1128.9	1128.6	1126.9	1125.1	1123.2	1121.4
177.5°	1126.9	1127.9	1128.9	1128.7	1127.5	1126.1	1124.8	1123.6
180°	1125.5	1125.5	1125.5	1125.5	1125.5	1125.5	1125.5	1125.5

(END OF REPORT)