

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: P332588-830

Luminaire Tested: **SA4XXDIP-C795D365U830-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332588-830  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA4XXDIP-C795D365U830-4F0-1E-UDD-F4  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 365 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

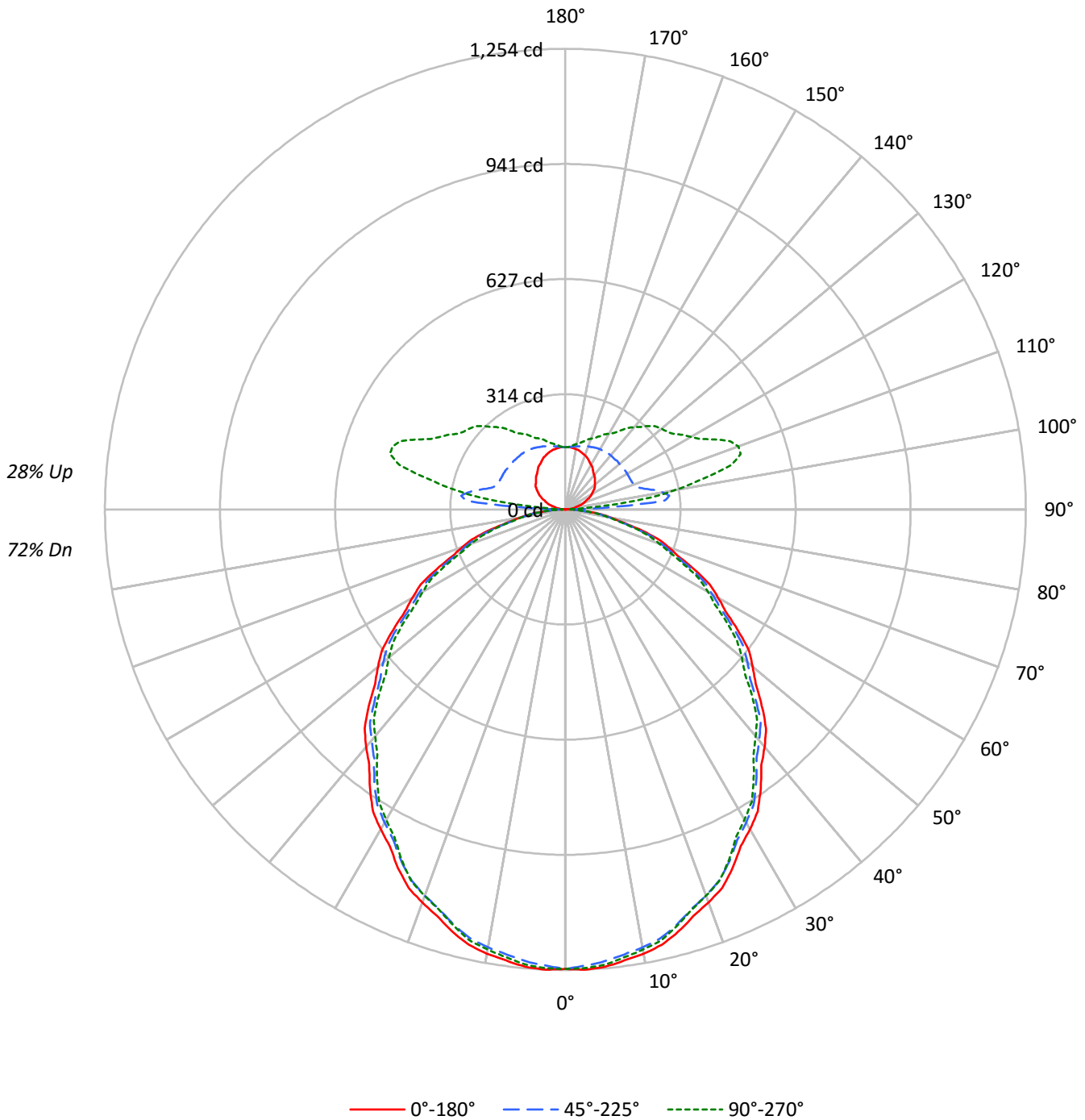
Lumens per Lamp: N/A  
Luminaire Lumens: 4444.8 lumens  
Efficiency: N/A  
Efficacy: 127.0 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: Semi-Direct

Input Watts (W): 35  
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	107	107	107	107	96	96	96	86	86	86	77	77	77	72				72
1	103	98	94	91	97	93	90	86	84	81	79	75	73	71	68	66	65	61				61
2	94	86	79	74	88	82	76	71	74	69	65	66	63	60	60	57	54	51				51
3	85	75	68	62	81	72	65	59	65	59	55	59	54	51	53	49	46	43				43
4	78	67	59	52	74	64	56	50	58	52	47	52	47	43	47	43	40	37				37
5	72	60	51	45	68	57	49	44	52	45	41	47	42	38	43	38	35	32				32
6	66	54	45	39	63	51	44	38	47	40	36	43	37	33	39	34	31	28				28
7	61	49	40	35	58	47	39	34	43	36	31	39	33	29	35	31	27	25				25
8	57	44	36	31	54	42	35	30	39	33	28	36	30	26	32	28	25	22				22
9	53	41	33	28	51	39	32	27	36	30	25	33	28	24	30	25	22	20				20
10	50	37	30	25	47	36	29	24	33	27	23	30	25	22	28	23	20	18				18

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

	0°	45°	90°
0°	10101	10101	10101
5°	10131	10009	10083
10°	10067	9928	9977
15°	9947	9787	9812
20°	9784	9613	9620
25°	9600	9413	9386
30°	9374	9177	9093
35°	9140	8932	8814
40°	8896	8652	8495
45°	8643	8379	8218
50°	8361	8133	7882
55°	8058	7817	7562
60°	7753	7463	7237
65°	7412	7125	6837
70°	7027	6675	6413
75°	6441	6129	5973
80°	5732	5500	5360
85°	5011	4826	4733



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	117.8	2.7
10°-20°	332.0	7.5
20°-30°	488.6	11.0
30°-40°	568.1	12.8
40°-50°	568.1	12.8
50°-60°	496.9	11.2
60°-70°	369.0	8.3
70°-80°	209.7	4.7
80°-90°	61.4	1.4
90°-100°	122.5	2.8
100°-110°	254.9	5.7
110°-120°	228.3	5.1
120°-130°	192.0	4.3
130°-140°	160.1	3.6
140°-150°	122.3	2.8
150°-160°	86.0	1.9
160°-170°	50.6	1.1
170°-180°	16.5	0.4
0°-30°	938.5	21.1
0°-40°	1506.5	33.9
0°-60°	2571.5	57.9
0°-90°	3211.7	72.3
90°-120°	605.7	13.6
90°-150°	1080.2	24.3
90°-180°	1233.0	27.7
0°-180°	4444.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1251	1251	1251	1251	1251	
5°	1250	1246	1235	1245	1244	119
15°	1190	1185	1171	1176	1174	335
25°	1078	1070	1057	1057	1054	496
35°	927	920	906	899	894	580
45°	757	749	734	723	720	583
55°	572	569	555	544	537	513
65°	388	383	373	363	358	384
75°	206	202	196	193	192	219
85°	54	54	52	52	51	60
90°	0	3	6	7	7	3
95°	11	35	272	134	81	12
105°	39	56	218	471	469	42
115°	69	86	195	374	450	68
125°	96	114	194	319	359	85
135°	114	135	192	283	321	88
145°	131	150	191	238	262	82
155°	149	161	186	210	220	69
165°	162	167	178	189	192	46
175°	169	170	171	173	173	16
180°	170	170	170	170	170	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2
2.5°	1254.4	1253.9	1253.3	1252.8	1252.3	1251.0	1249.1	1247.1	1245.1	1243.2	1244.9
5°	1250.2	1249.3	1248.4	1247.5	1246.6	1244.9	1242.5	1240.0	1237.6	1235.1	1237.6
7.5°	1238.6	1237.7	1236.8	1235.9	1235.0	1233.2	1230.5	1227.8	1225.0	1222.3	1224.3
10°	1228.1	1227.3	1226.3	1225.5	1224.6	1222.7	1219.7	1216.9	1214.0	1211.1	1212.9
12.5°	1214.5	1213.6	1212.7	1211.8	1211.0	1208.9	1205.9	1202.8	1199.8	1196.7	1198.6
15°	1190.1	1189.1	1188.3	1187.3	1186.5	1184.4	1181.0	1177.7	1174.3	1171.0	1172.3
17.5°	1160.6	1159.4	1158.3	1157.3	1156.1	1154.0	1150.8	1147.6	1144.4	1141.3	1142.2
20°	1138.9	1137.7	1136.7	1135.6	1134.4	1132.2	1128.9	1125.5	1122.2	1118.9	1119.6
22.5°	1115.7	1114.2	1112.7	1111.3	1109.7	1107.4	1104.0	1100.7	1097.3	1094.0	1095.2
25°	1077.7	1076.2	1074.6	1073.1	1071.5	1069.1	1066.0	1062.9	1059.8	1056.7	1056.9
27.5°	1034.4	1032.8	1031.2	1029.6	1028.0	1025.8	1022.8	1020.0	1017.1	1014.2	1013.6
30°	1005.6	1003.8	1002.0	1000.2	998.4	996.1	993.2	990.3	987.4	984.5	983.6
32.5°	975.1	973.5	971.9	970.3	968.7	966.3	963.3	960.2	957.2	954.0	953.0
35°	927.4	925.8	924.3	922.7	921.1	918.8	915.7	912.6	909.5	906.3	904.7
37.5°	877.0	875.6	874.2	872.8	871.3	868.9	865.6	862.2	858.9	855.5	853.8
40°	844.1	842.4	840.6	838.8	837.0	834.4	831.1	827.7	824.4	821.0	818.9
42.5°	808.9	807.8	806.7	805.7	804.6	802.2	798.5	794.8	791.1	787.4	784.9
45°	757.0	755.4	753.8	752.2	750.7	748.1	744.6	741.0	737.4	733.9	731.4
47.5°	702.6	701.5	700.5	699.4	698.3	696.2	692.9	689.6	686.3	683.0	680.1
50°	665.7	664.8	663.9	663.0	662.1	660.2	657.0	653.9	650.7	647.6	644.5
52.5°	629.6	628.6	627.5	626.4	625.3	623.1	619.8	616.5	613.2	609.9	607.2
55°	572.5	571.7	571.1	570.4	569.8	567.9	564.8	561.7	558.6	555.4	552.7
57.5°	517.9	517.2	516.4	515.7	514.9	512.9	509.9	506.8	503.8	500.7	498.1
60°	480.2	479.1	478.0	476.9	475.8	473.7	470.9	468.0	465.1	462.2	460.1
62.5°	443.4	442.4	441.5	440.5	439.6	437.6	434.5	431.4	428.4	425.3	423.5
65°	388.0	386.9	385.8	384.7	383.5	381.8	379.7	377.4	375.1	373.0	370.7
67.5°	332.2	331.2	330.2	329.1	328.2	326.6	324.4	322.3	320.2	318.0	315.8
70°	297.7	296.2	294.6	293.0	291.5	289.8	288.0	286.3	284.5	282.8	281.0
72.5°	260.9	259.3	257.8	256.2	254.6	253.2	251.8	250.2	248.8	247.4	246.0
75°	206.5	205.4	204.3	203.2	202.1	201.0	199.8	198.7	197.7	196.5	195.6
77.5°	154.6	154.1	153.6	153.2	152.6	151.9	150.9	150.0	148.9	148.0	147.7
80°	123.3	122.6	122.0	121.3	120.6	120.1	119.6	119.2	118.8	118.3	117.8
82.5°	92.8	92.6	92.2	91.9	91.6	91.4	91.3	91.2	91.1	91.0	90.8
85°	54.1	54.1	54.1	54.1	54.1	53.9	53.4	53.1	52.6	52.1	52.1
87.5°	20.9	20.8	20.9	20.8	20.6	20.5	20.7	20.5	20.5	20.5	20.4
90°	0.4	1.0	2.0	2.4	2.6	2.6	4.6	4.6	5.4	6.0	5.7
92.5°	3.8	5.6	8.7	12.7	17.6	24.5	41.5	67.3	92.5	105.7	88.0
95°	11.0	12.0	15.4	19.7	27.6	41.7	70.6	125.3	204.9	271.5	279.2
97.5°	19.7	19.7	22.6	26.6	33.5	45.1	67.5	112.6	191.7	286.0	350.7
100°	25.4	25.4	27.6	31.7	38.0	48.6	68.3	105.9	173.9	267.9	353.1
102.5°	30.6	31.2	33.3	36.9	43.1	53.2	71.0	104.1	161.9	245.2	333.1
105°	39.0	40.0	41.7	45.6	51.7	61.3	77.3	104.9	151.6	218.5	296.8
107.5°	48.2	48.8	50.5	54.8	60.5	70.0	84.6	109.9	149.7	203.6	267.5
110°	54.3	55.0	56.6	60.6	66.6	75.6	90.3	113.6	150.2	198.5	252.9



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	60.1	60.8	62.8	66.4	72.5	81.4	95.6	117.6	151.8	196.1	244.6
115°	68.6	69.7	71.9	75.3	81.6	90.6	104.0	123.9	154.9	194.9	236.9
117.5°	77.4	78.3	80.4	84.1	90.0	99.3	112.0	130.4	158.2	194.5	233.4
120°	83.3	84.0	86.2	89.9	95.6	104.9	117.6	134.9	160.6	194.5	231.5
122.5°	88.6	89.3	91.6	95.0	101.2	110.3	122.9	139.2	163.0	194.3	229.4
125°	95.6	96.9	99.0	102.6	109.0	118.3	130.3	145.5	166.5	193.9	225.8
127.5°	101.8	102.8	105.3	109.4	116.0	125.5	137.0	151.1	169.5	193.1	221.1
130°	105.3	106.6	109.2	114.2	120.6	130.3	141.6	154.6	171.5	192.8	218.2
132.5°	108.8	109.8	113.3	118.0	124.9	133.9	145.3	158.1	173.4	192.7	215.6
135°	113.6	114.9	118.3	123.9	130.9	139.6	150.5	162.6	176.3	192.2	211.5
137.5°	118.5	119.7	123.4	128.8	136.0	144.3	154.6	165.8	177.9	192.2	208.1
140°	122.0	122.9	126.6	132.2	139.2	147.2	157.2	167.9	179.2	191.9	206.2
142.5°	125.6	126.7	130.1	135.4	142.1	149.9	159.7	169.5	180.3	191.9	204.6
145°	130.9	132.0	135.3	139.9	146.3	153.5	162.2	171.3	180.9	191.2	201.9
147.5°	136.9	137.1	140.2	144.9	150.1	156.7	164.9	172.8	181.3	190.0	199.4
150°	140.5	140.9	143.5	147.6	152.6	158.9	166.3	173.5	181.3	189.2	197.6
152.5°	144.0	144.1	146.8	150.5	155.0	160.8	167.3	174.1	180.7	187.8	195.4
155°	148.9	149.2	151.3	154.6	158.3	163.2	168.9	174.6	179.9	185.9	192.2
157.5°	153.6	153.6	155.5	158.1	161.3	165.2	170.0	174.6	179.0	183.8	189.0
160°	156.6	156.6	157.9	160.2	162.9	166.5	170.6	174.6	178.2	182.2	186.5
162.5°	159.2	159.0	160.0	162.1	164.5	167.4	171.1	174.6	177.4	180.6	184.5
165°	162.2	162.2	162.9	164.6	166.3	168.2	171.3	173.9	175.9	178.2	180.9
167.5°	165.2	164.9	165.2	166.5	167.4	169.0	171.2	173.1	174.3	175.8	177.7
170°	166.5	166.3	166.5	167.6	168.2	169.2	170.9	172.6	173.2	174.2	175.6
172.5°	167.9	167.6	167.6	168.3	168.7	169.5	170.6	172.0	172.2	172.6	173.7
175°	169.2	168.9	168.9	169.2	169.6	169.6	170.2	171.3	170.9	170.9	171.5
177.5°	169.8	169.6	169.3	169.6	169.6	169.6	169.8	170.3	169.8	169.8	170.1
180°	169.6	169.6	169.6	169.6	169.6	169.6	169.6	169.6	169.6	169.6	169.6



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2
2.5°	1246.7	1248.5	1250.3	1251.1	1250.9	1250.8	1250.6	1250.4
5°	1240.0	1242.5	1244.9	1245.9	1245.5	1245.1	1244.6	1244.2
7.5°	1226.2	1228.2	1230.1	1231.0	1230.8	1230.5	1230.2	1229.9
10°	1214.7	1216.4	1218.2	1218.9	1218.4	1218.0	1217.6	1217.1
12.5°	1200.6	1202.5	1204.5	1205.1	1204.6	1203.9	1203.2	1202.7
15°	1173.7	1175.0	1176.3	1176.7	1176.0	1175.4	1174.7	1174.0
17.5°	1143.0	1143.9	1144.7	1144.9	1144.4	1144.0	1143.6	1143.1
20°	1120.2	1120.9	1121.5	1121.6	1121.2	1120.8	1120.3	1119.8
22.5°	1096.4	1097.6	1098.8	1099.0	1098.2	1097.4	1096.6	1095.8
25°	1057.2	1057.3	1057.6	1057.2	1056.4	1055.5	1054.6	1053.7
27.5°	1013.1	1012.6	1012.0	1011.3	1010.1	1009.0	1007.9	1006.7
30°	982.7	981.8	980.9	980.0	978.8	977.7	976.6	975.5
32.5°	951.9	950.8	949.8	948.7	947.5	946.4	945.3	944.2
35°	903.2	901.6	900.0	898.7	897.6	896.5	895.4	894.3
37.5°	852.2	850.5	848.9	847.3	845.7	844.3	842.8	841.3
40°	816.6	814.5	812.2	810.5	809.4	808.3	807.2	806.1
42.5°	782.2	779.7	777.0	775.4	774.7	773.9	773.2	772.4
45°	729.0	726.5	724.1	722.6	721.8	721.1	720.5	719.8
47.5°	677.4	674.7	671.8	669.7	668.0	666.3	664.6	662.9
50°	641.4	638.3	635.2	632.9	631.6	630.3	629.0	627.6
52.5°	604.5	601.6	598.9	596.7	595.0	593.3	591.6	589.9
55°	550.1	547.4	544.7	542.7	541.4	540.1	538.7	537.3
57.5°	495.6	493.0	490.5	488.6	487.3	486.0	484.7	483.4
60°	458.2	456.2	454.1	452.6	451.5	450.3	449.2	448.2
62.5°	421.6	419.8	418.0	416.5	415.4	414.2	413.2	412.1
65°	368.5	366.3	364.0	362.4	361.3	360.1	359.0	357.9
67.5°	313.8	311.6	309.4	308.2	307.9	307.6	307.3	307.0
70°	279.2	277.4	275.6	274.4	273.7	273.1	272.4	271.7
72.5°	244.6	243.2	241.8	240.7	240.0	239.3	238.7	238.0
75°	194.7	193.8	192.9	192.4	192.2	191.9	191.7	191.5
77.5°	147.4	147.1	146.9	146.5	145.9	145.3	144.8	144.2
80°	117.4	117.0	116.5	116.2	115.9	115.7	115.6	115.3
82.5°	90.5	90.2	89.9	89.7	89.5	89.3	89.1	88.8
85°	52.1	52.1	52.1	52.0	51.8	51.6	51.4	51.1
87.5°	20.5	20.5	20.5	20.5	20.6	20.7	20.6	20.6
90°	6.0	6.3	6.7	6.7	7.0	7.4	7.0	7.0
92.5°	65.4	49.2	39.2	32.5	28.6	26.8	25.6	25.6
95°	246.9	195.2	150.5	118.3	101.9	91.6	85.6	81.2
97.5°	364.7	345.5	312.9	278.1	254.2	234.2	224.2	217.3
100°	401.7	408.4	392.1	367.4	338.5	318.1	308.1	305.5
102.5°	399.9	432.9	437.6	427.3	409.6	394.9	384.4	382.2
105°	373.1	430.7	463.7	477.4	478.1	475.3	470.7	468.7
107.5°	335.1	396.4	442.8	472.6	489.0	496.6	499.9	500.8
110°	312.2	369.8	418.1	454.7	478.3	492.4	498.3	501.3





TEST NUMBER: P332588-830

CATALOG NUMBER: SA4XXDIP-C795D365U830-4F0-1E-UDD-F4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	295.3	346.3	391.9	428.6	455.4	472.4	480.8	485.6
115°	278.5	319.4	358.4	390.4	416.7	436.7	447.4	450.1
117.5°	270.2	304.2	334.8	361.9	384.4	401.1	411.9	414.0
120°	266.5	297.5	324.1	347.8	366.7	381.4	390.1	393.8
122.5°	263.3	293.2	317.4	338.2	354.2	366.7	374.1	377.8
125°	257.9	286.4	309.4	327.8	341.1	350.8	357.1	359.1
127.5°	251.2	278.5	301.5	318.9	332.2	340.8	346.2	348.2
130°	245.8	272.2	294.8	312.5	326.1	334.4	339.8	341.8
132.5°	240.3	264.9	287.1	304.7	318.1	327.5	332.6	334.6
135°	232.5	254.2	274.5	291.2	304.4	313.8	319.1	321.1
137.5°	225.6	243.8	261.0	276.0	288.5	297.7	302.1	304.4
140°	221.5	237.1	252.1	266.2	277.9	285.1	289.8	292.5
142.5°	217.8	231.6	244.4	256.6	266.9	273.7	277.9	279.7
145°	212.5	223.9	233.8	243.2	251.5	257.1	260.5	262.1
147.5°	208.2	217.2	225.2	232.5	238.7	243.6	246.0	246.7
150°	205.6	213.2	219.9	225.8	231.2	235.5	237.5	237.8
152.5°	202.6	209.2	215.4	220.3	224.8	228.3	229.5	229.9
155°	198.2	203.5	208.5	212.5	215.8	218.5	219.5	219.5
157.5°	193.5	197.9	202.2	205.4	207.8	209.9	210.5	210.5
160°	190.6	194.2	197.8	200.6	202.6	204.5	204.9	204.9
162.5°	187.7	190.8	193.6	196.0	197.5	199.4	199.8	199.5
165°	183.5	185.6	187.8	189.5	190.9	192.2	191.9	191.5
167.5°	179.6	181.2	183.0	184.0	184.6	185.6	185.5	185.2
170°	177.2	178.2	179.6	180.6	181.3	181.5	181.3	181.3
172.5°	175.1	175.8	176.6	177.4	177.8	178.0	177.8	177.2
175°	172.2	172.6	173.2	173.2	173.2	173.9	173.2	172.6
177.5°	170.3	170.6	170.6	170.9	170.6	170.9	170.3	169.8
180°	169.6	169.6	169.6	169.6	169.6	169.6	169.6	169.6

(END OF REPORT)