

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: P332004

Luminaire Tested: **S123DIP-S1000D365U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332004  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123DIP-S1000D365U835-4F0-1E-UDD-D1  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 365 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5446.4 lumens  
Efficiency: N/A  
Efficacy: 125.2 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

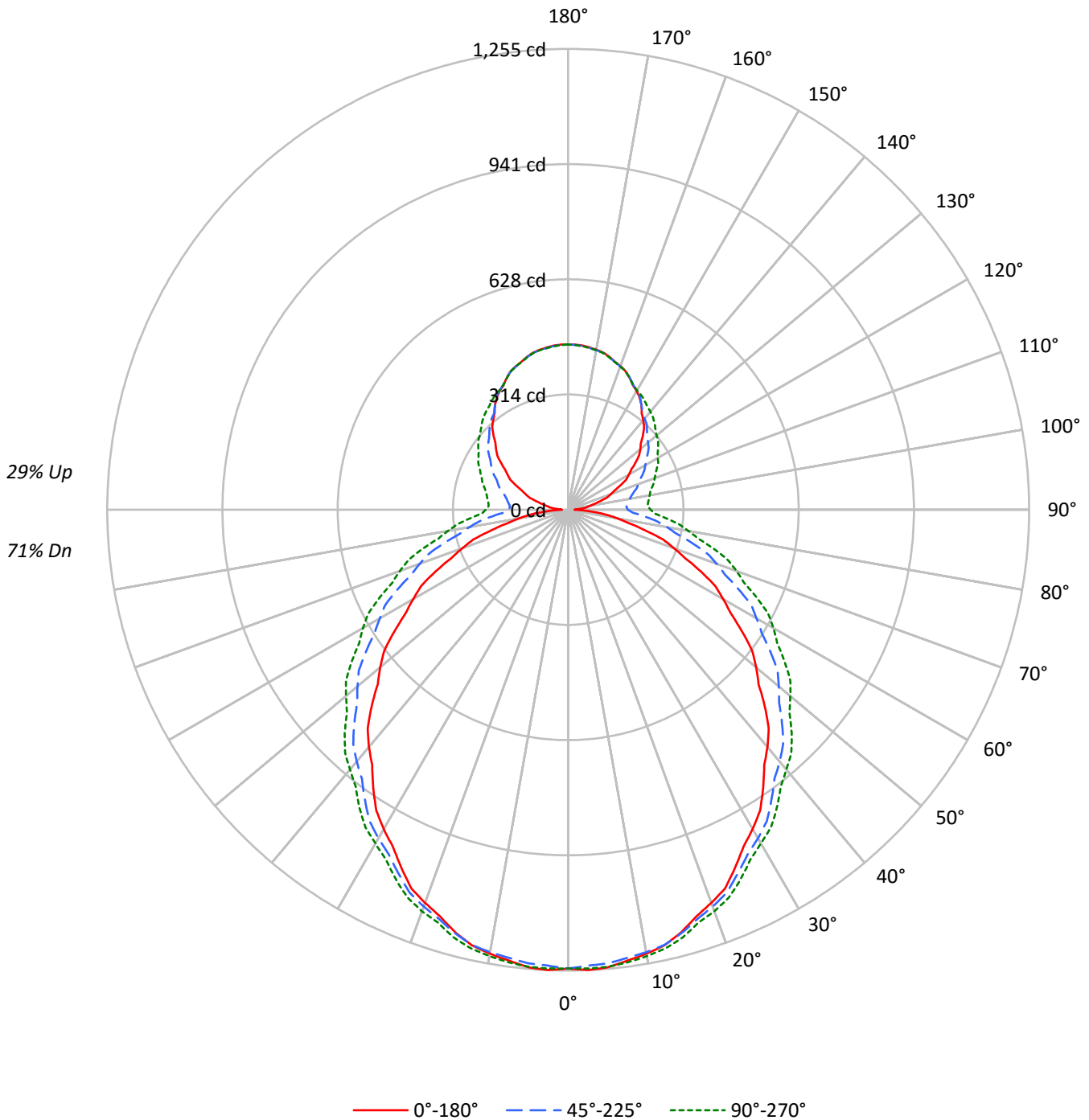
Input Watts (W): 43.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	50	30	10	0		
RCR																										
0	112	112	112	112	106	106	106	106	95	95	95	85	85	85	75	75	75	75	75	75	75	75	75	71		
1	101	96	91	87	95	91	87	83	81	78	75	72	70	67	64	62	60	60	60	60	60	60	60	56		
2	91	83	76	70	86	78	72	67	70	65	61	63	59	55	56	53	50	50	50	50	50	50	50	46		
3	83	72	64	58	78	69	61	55	61	56	51	55	50	46	49	45	42	42	42	42	42	42	42	38		
4	76	64	55	49	71	61	53	47	54	48	43	49	43	39	43	39	36	36	36	36	36	36	36	33		
5	70	57	48	41	65	54	46	40	49	42	37	44	38	34	39	34	31	31	31	31	31	31	31	28		
6	64	51	42	36	60	49	40	35	44	37	32	39	34	30	35	31	27	27	27	27	27	27	27	24		
7	59	46	38	32	56	44	36	30	40	33	28	36	30	26	32	27	24	24	24	24	24	24	24	22		
8	55	42	34	28	52	40	32	27	36	30	25	33	27	23	29	25	21	21	21	21	21	21	21	19		
9	51	38	30	25	48	37	29	24	33	27	22	30	25	21	27	23	19	19	19	19	19	19	19	17		
10	48	35	28	22	45	34	27	22	31	25	20	28	23	19	25	21	17	17	17	17	17	17	17	16		

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

	0°	45°	90°
0°	13448	13448	13448
5°	13490	13110	13117
10°	13370	12808	12744
15°	13197	12465	12336
20°	12951	12074	11888
25°	12647	11623	11416
30°	12335	11217	10938
35°	11987	10789	10556
40°	11653	10399	10147
45°	11284	10024	9821
50°	10920	9654	9461
55°	10517	9275	9136
60°	10125	8890	8804
65°	9723	8481	8409
70°	9115	8019	8005
75°	8351	7490	7593
80°	7467	6971	7122
85°	6653	6616	6850



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	118.4	2.2
10°-20°	337.6	6.2
20°-30°	505.0	9.3
30°-40°	603.1	11.1
40°-50°	631.0	11.6
50°-60°	592.1	10.9
60°-70°	494.5	9.1
70°-80°	353.8	6.5
80°-90°	212.3	3.9
90°-100°	161.7	3.0
100°-110°	185.0	3.4
110°-120°	214.2	3.9
120°-130°	233.4	4.3
130°-140°	237.2	4.4
140°-150°	220.4	4.0
150°-160°	182.6	3.4
160°-170°	121.5	2.2
170°-180°	42.5	0.8
0°-30°	961.1	17.6
0°-40°	1564.1	28.7
0°-60°	2787.2	51.2
0°-90°	3847.9	70.7
90°-120°	560.9	10.3
90°-150°	1251.9	23.0
90°-180°	1598.0	29.3
0°-180°	5446.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1249	1249	1249	1249	1249	
5°	1251	1248	1240	1250	1249	119
15°	1191	1195	1194	1206	1206	335
25°	1075	1088	1093	1110	1111	495
35°	926	947	965	985	991	579
45°	757	790	823	848	860	583
55°	577	622	671	706	719	517
65°	399	452	512	551	566	394
75°	216	281	348	392	410	231
85°	67	135	207	251	267	70
90°	18	88	162	208	224	13
95°	36	92	161	203	218	35
105°	90	125	186	222	236	96
115°	157	176	223	254	266	156
125°	224	227	264	290	299	200
135°	288	289	303	325	332	222
145°	347	347	348	358	362	217
155°	396	396	396	398	395	182
165°	432	430	430	432	430	122
175°	449	448	447	449	447	43
180°	450	450	450	450	450	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4
2.5°	1254.9	1254.2	1253.4	1252.7	1252.0	1250.6	1248.7	1246.8	1244.8	1242.9	1244.8
5°	1250.8	1250.2	1249.6	1249.0	1248.4	1247.2	1245.4	1243.5	1241.7	1239.9	1242.3
7.5°	1238.5	1238.7	1238.8	1238.9	1239.0	1238.2	1236.5	1234.7	1232.9	1231.2	1234.2
10°	1227.7	1228.3	1228.9	1229.5	1230.1	1229.6	1228.1	1226.6	1225.1	1223.6	1226.6
12.5°	1214.6	1215.4	1216.3	1217.1	1218.0	1217.9	1216.9	1215.8	1214.8	1213.8	1216.6
15°	1190.9	1191.8	1192.7	1193.6	1194.5	1194.8	1194.5	1194.2	1193.9	1193.6	1196.7
17.5°	1161.0	1162.8	1164.6	1166.4	1168.2	1169.1	1169.0	1168.8	1168.7	1168.6	1171.3
20°	1139.2	1141.0	1142.8	1144.6	1146.4	1147.7	1148.3	1148.9	1149.5	1150.1	1152.8
22.5°	1116.3	1118.1	1120.0	1121.8	1123.6	1124.9	1125.8	1126.6	1127.5	1128.3	1131.7
25°	1075.2	1078.2	1081.3	1084.3	1087.3	1089.3	1090.2	1091.1	1092.0	1092.9	1096.8
27.5°	1033.8	1037.3	1040.7	1044.2	1047.6	1050.3	1052.3	1054.2	1056.1	1058.1	1061.5
30°	1004.4	1008.4	1012.3	1016.2	1020.2	1023.3	1025.8	1028.2	1030.6	1033.0	1036.7
32.5°	971.8	976.2	980.6	985.0	989.4	993.2	996.4	999.5	1002.7	1005.8	1009.7
35°	925.5	930.3	935.2	940.0	944.9	949.2	953.2	957.1	961.0	965.0	969.5
37.5°	876.5	882.0	887.4	892.8	898.3	903.4	908.3	913.1	917.9	922.8	927.9
40°	843.8	849.3	854.7	860.2	865.6	871.4	877.4	883.5	889.5	895.6	900.7
42.5°	807.9	814.6	821.2	827.9	834.5	841.0	847.3	853.6	859.9	866.2	871.8
45°	756.7	764.0	771.3	778.5	785.8	793.2	800.7	808.3	815.9	823.4	829.2
47.5°	703.1	711.3	719.6	727.8	736.0	744.5	753.1	761.8	770.4	779.1	785.5
50°	668.3	676.7	685.2	693.7	702.1	711.1	720.4	729.8	739.2	748.6	755.5
52.5°	631.2	640.2	649.2	658.1	667.1	676.7	687.1	697.4	707.7	718.1	725.3
55°	577.1	587.1	597.0	607.0	617.0	627.4	638.3	649.2	660.1	671.0	679.2
57.5°	524.3	534.7	545.1	555.5	565.9	577.1	589.0	600.9	612.8	624.7	632.9
60°	487.3	498.1	509.0	519.9	530.8	542.4	554.8	567.3	579.7	592.1	600.5
62.5°	452.4	463.5	474.7	485.8	496.9	509.1	522.2	535.3	548.4	561.6	570.0
65°	398.8	410.6	422.4	434.2	446.0	458.5	471.8	485.1	498.4	511.8	520.8
67.5°	344.3	356.9	369.4	381.9	394.4	407.5	421.0	434.6	448.1	461.7	471.6
70°	306.2	319.2	332.2	345.3	358.3	372.0	386.5	401.1	415.6	430.1	439.8
72.5°	271.4	284.4	297.4	310.4	323.4	337.4	352.4	367.4	382.4	397.4	407.3
75°	216.4	230.6	244.8	259.1	273.3	287.9	303.1	318.2	333.3	348.4	358.4
77.5°	168.5	182.8	197.2	211.5	225.8	240.6	255.9	271.1	286.4	301.6	312.1
80°	134.7	149.6	164.4	179.2	194.0	209.3	225.0	240.8	256.5	272.2	282.5
82.5°	105.3	120.4	135.5	150.5	165.6	181.1	197.1	213.0	229.0	245.0	255.3
85°	66.7	81.8	96.9	112.1	127.2	142.8	158.8	174.8	190.8	206.9	217.2
87.5°	36.3	51.5	66.7	81.9	97.2	112.6	128.2	143.8	159.5	175.1	185.4
90°	18.0	33.7	49.3	64.9	80.5	96.5	112.9	129.4	145.8	162.3	172.9
92.5°	25.2	39.1	53.0	66.9	80.8	95.6	111.4	127.1	142.9	158.7	168.9
95°	35.8	48.2	60.5	72.9	85.2	99.1	114.5	130.0	145.4	160.9	170.6
97.5°	50.4	61.4	72.5	83.5	94.6	107.4	122.0	136.6	151.3	165.9	175.2
100°	60.3	70.5	80.6	90.8	100.9	113.1	127.4	141.7	156.1	170.4	179.4
102.5°	71.9	80.9	89.9	98.9	107.9	119.5	133.7	147.9	162.1	176.3	185.0
105°	90.4	97.8	105.2	112.6	120.1	130.6	144.3	158.1	171.8	185.5	193.9
107.5°	110.5	116.8	123.1	129.3	135.6	145.0	157.7	170.3	182.9	195.5	203.9
110°	123.0	128.6	134.2	139.8	145.4	154.4	166.6	178.9	191.1	203.4	211.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	137.2	141.7	146.3	150.9	155.4	163.5	175.2	186.8	198.5	210.1	218.1
115°	157.0	160.9	164.7	168.6	172.5	179.8	190.5	201.2	211.9	222.7	230.0
117.5°	178.1	180.5	182.9	185.3	187.6	193.9	203.9	213.9	223.9	233.9	241.1
120°	190.3	192.3	194.2	196.2	198.2	204.0	213.6	223.2	232.8	242.3	249.2
122.5°	204.1	205.3	206.4	207.5	208.6	213.9	223.2	232.4	241.7	251.0	257.5
125°	223.9	224.1	224.4	224.6	224.8	229.3	237.9	246.5	255.1	263.7	269.8
127.5°	243.4	243.6	243.8	244.0	244.2	247.8	254.9	262.0	269.1	276.2	281.7
130°	256.4	256.7	257.1	257.4	257.7	260.8	266.6	272.4	278.2	284.0	289.5
132.5°	268.3	268.9	269.5	270.0	270.6	273.2	277.9	282.5	287.2	291.9	297.0
135°	287.9	288.1	288.2	288.4	288.6	290.3	293.5	296.8	300.0	303.3	308.4
137.5°	306.0	306.2	306.3	306.5	306.6	307.7	309.8	311.9	314.0	316.0	320.5
140°	317.6	318.0	318.4	318.8	319.2	319.9	320.9	321.9	322.9	323.8	328.3
142.5°	329.2	329.4	329.5	329.7	329.8	330.1	330.4	330.7	331.0	331.4	335.3
145°	347.3	347.2	347.0	346.9	346.7	346.8	347.0	347.3	347.5	347.7	350.1
147.5°	361.8	362.1	362.4	362.7	362.9	363.2	363.4	363.6	363.8	364.1	364.8
150°	372.8	373.0	373.1	373.3	373.5	373.6	373.8	373.9	374.1	374.2	374.2
152.5°	381.9	382.1	382.3	382.5	382.8	382.9	383.0	383.1	383.2	383.3	383.4
155°	396.2	396.2	396.2	396.2	396.2	396.2	396.3	396.3	396.4	396.5	396.8
157.5°	408.3	408.2	408.1	408.0	407.9	407.9	408.0	408.0	408.1	408.2	408.5
160°	415.9	415.8	415.6	415.5	415.3	415.2	415.2	415.2	415.2	415.2	415.6
162.5°	422.7	422.5	422.3	422.1	421.8	421.8	421.8	421.9	422.0	422.0	422.4
165°	431.5	431.3	431.0	430.8	430.5	430.4	430.4	430.4	430.4	430.4	430.9
167.5°	438.5	438.2	437.9	437.5	437.2	437.1	437.2	437.2	437.3	437.4	437.8
170°	442.4	442.1	441.8	441.5	441.2	441.0	441.0	441.0	441.0	441.0	441.6
172.5°	445.6	445.2	444.9	444.6	444.3	444.1	444.1	444.1	444.1	444.1	444.6
175°	448.8	448.5	448.2	447.9	447.6	447.4	447.4	447.4	447.4	447.4	447.9
177.5°	450.1	449.9	449.6	449.4	449.1	449.0	449.0	449.0	449.0	449.0	449.4
180°	449.9	449.9	449.9	449.9	449.9	449.9	449.9	449.9	449.9	449.9	449.9



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4	1249.4
2.5°	1246.8	1248.7	1250.6	1251.5	1251.2	1251.0	1250.8	1250.5
5°	1244.7	1247.2	1249.6	1250.6	1250.3	1250.0	1249.7	1249.4
7.5°	1237.2	1240.3	1243.3	1244.6	1244.3	1243.9	1243.5	1243.2
10°	1229.6	1232.6	1235.7	1236.9	1236.3	1235.7	1235.1	1234.5
12.5°	1219.3	1222.1	1224.9	1226.0	1225.4	1224.8	1224.2	1223.6
15°	1199.7	1202.7	1205.7	1207.1	1206.8	1206.5	1206.2	1205.9
17.5°	1174.0	1176.8	1179.5	1180.6	1180.2	1179.8	1179.4	1178.9
20°	1155.5	1158.2	1161.0	1162.5	1162.8	1163.1	1163.4	1163.7
22.5°	1135.2	1138.6	1142.1	1143.7	1143.5	1143.4	1143.2	1143.0
25°	1100.8	1104.7	1108.6	1110.6	1110.6	1110.6	1110.6	1110.6
27.5°	1064.8	1068.2	1071.6	1073.4	1073.7	1073.9	1074.2	1074.4
30°	1040.3	1043.9	1047.5	1049.4	1049.4	1049.4	1049.4	1049.4
32.5°	1013.6	1017.4	1021.3	1023.6	1024.3	1025.0	1025.8	1026.5
35°	974.0	978.6	983.1	986.0	987.2	988.4	989.6	990.8
37.5°	933.1	938.2	943.4	946.4	947.4	948.3	949.3	950.3
40°	905.8	911.0	916.1	919.3	920.5	921.7	922.9	924.1
42.5°	877.4	883.0	888.7	892.3	894.0	895.7	897.4	899.1
45°	834.9	840.7	846.4	850.5	852.9	855.3	857.8	860.2
47.5°	792.0	798.5	804.9	809.1	811.0	812.9	814.7	816.6
50°	762.5	769.4	776.4	780.9	783.1	785.2	787.3	789.4
52.5°	732.5	739.7	746.9	751.8	754.4	757.0	759.6	762.2
55°	687.3	695.5	703.7	708.9	711.4	713.8	716.2	718.6
57.5°	641.2	649.4	657.6	663.2	666.0	668.8	671.7	674.5
60°	609.0	617.5	625.9	631.8	635.2	638.5	641.8	645.1
62.5°	578.5	587.0	595.4	601.2	604.3	607.4	610.5	613.6
65°	529.9	539.0	548.0	554.1	557.1	560.1	563.2	566.2
67.5°	481.5	491.4	501.3	507.6	510.1	512.7	515.2	517.7
70°	449.4	459.1	468.8	475.2	478.2	481.2	484.2	487.3
72.5°	417.3	427.2	437.1	443.6	446.6	449.6	452.7	455.7
75°	368.4	378.4	388.3	395.2	398.8	402.4	406.0	409.7
77.5°	322.7	333.2	343.7	350.4	353.1	355.9	358.7	361.5
80°	292.8	303.1	313.3	320.0	323.0	326.0	329.1	332.1
82.5°	265.6	275.8	286.1	292.8	295.8	298.8	301.8	304.9
85°	227.4	237.7	248.0	254.7	257.7	260.7	263.7	266.8
87.5°	195.8	206.1	216.5	223.2	226.2	229.3	232.3	235.4
90°	183.5	194.1	204.7	211.6	214.7	217.9	221.1	224.3
92.5°	179.2	189.5	199.8	206.3	209.0	211.7	214.4	217.1
95°	180.3	190.0	199.7	206.0	209.0	212.1	215.1	218.1
97.5°	184.6	194.0	203.4	209.5	212.5	215.5	218.5	221.5
100°	188.4	197.4	206.4	212.5	215.7	218.8	222.0	225.2
102.5°	193.8	202.6	211.3	217.2	220.2	223.2	226.2	229.2
105°	202.4	210.9	219.4	225.0	227.9	230.8	233.7	236.5
107.5°	212.2	220.6	229.0	234.4	237.0	239.6	242.1	244.7
110°	219.7	227.9	236.1	241.3	243.6	245.8	248.1	250.4





TEST NUMBER: P332004

CATALOG NUMBER: S123DIP-S1000D365U835-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	226.1	234.1	242.1	247.4	250.1	252.7	255.3	258.0
115°	237.4	244.7	252.0	256.9	259.2	261.6	263.9	266.2
117.5°	248.3	255.5	262.7	267.3	269.5	271.6	273.7	275.9
120°	256.1	263.0	269.9	274.3	276.2	278.2	280.2	282.1
122.5°	264.1	270.6	277.1	281.3	283.2	285.1	287.0	288.9
125°	275.8	281.8	287.9	291.8	293.6	295.4	297.2	299.0
127.5°	287.3	292.8	298.4	302.0	303.7	305.4	307.1	308.8
130°	294.9	300.3	305.8	309.1	310.4	311.6	312.9	314.2
132.5°	302.1	307.3	312.4	315.8	317.4	319.0	320.7	322.3
135°	313.5	318.7	323.8	327.0	328.4	329.8	331.1	332.5
137.5°	324.9	329.4	333.8	336.7	337.9	339.1	340.3	341.5
140°	332.8	337.2	341.7	344.4	345.4	346.3	347.3	348.2
142.5°	339.3	343.3	347.3	349.8	350.9	352.0	353.1	354.1
145°	352.4	354.8	357.1	358.7	359.6	360.5	361.4	362.3
147.5°	365.5	366.2	367.0	367.6	368.3	368.9	369.5	370.1
150°	374.2	374.2	374.2	374.3	374.4	374.6	374.7	374.8
152.5°	383.5	383.7	383.8	383.7	383.4	383.1	382.8	382.6
155°	397.1	397.4	397.8	397.6	397.1	396.5	396.0	395.4
157.5°	408.8	409.2	409.5	409.4	409.0	408.6	408.1	407.7
160°	416.0	416.4	416.8	416.8	416.5	416.2	415.9	415.6
162.5°	422.8	423.2	423.6	423.5	423.0	422.5	422.0	421.5
165°	431.4	431.8	432.3	432.3	431.7	431.2	430.6	430.1
167.5°	438.3	438.8	439.3	439.3	438.8	438.3	437.8	437.4
170°	442.1	442.7	443.2	443.2	442.7	442.1	441.6	441.0
172.5°	445.1	445.6	446.1	446.1	445.5	445.0	444.4	443.9
175°	448.3	448.8	449.3	449.2	448.7	448.1	447.6	447.0
177.5°	449.8	450.1	450.5	450.5	450.1	449.6	449.2	448.7
180°	449.9	449.9	449.9	449.9	449.9	449.9	449.9	449.9

(END OF REPORT)