

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: P331962-830

Luminaire Tested: **S123DIP-S775D365U830-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331962-830
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-S775D365U830-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH 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: 4162.7 lumens
Efficiency: N/A
Efficacy: 118.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Direct

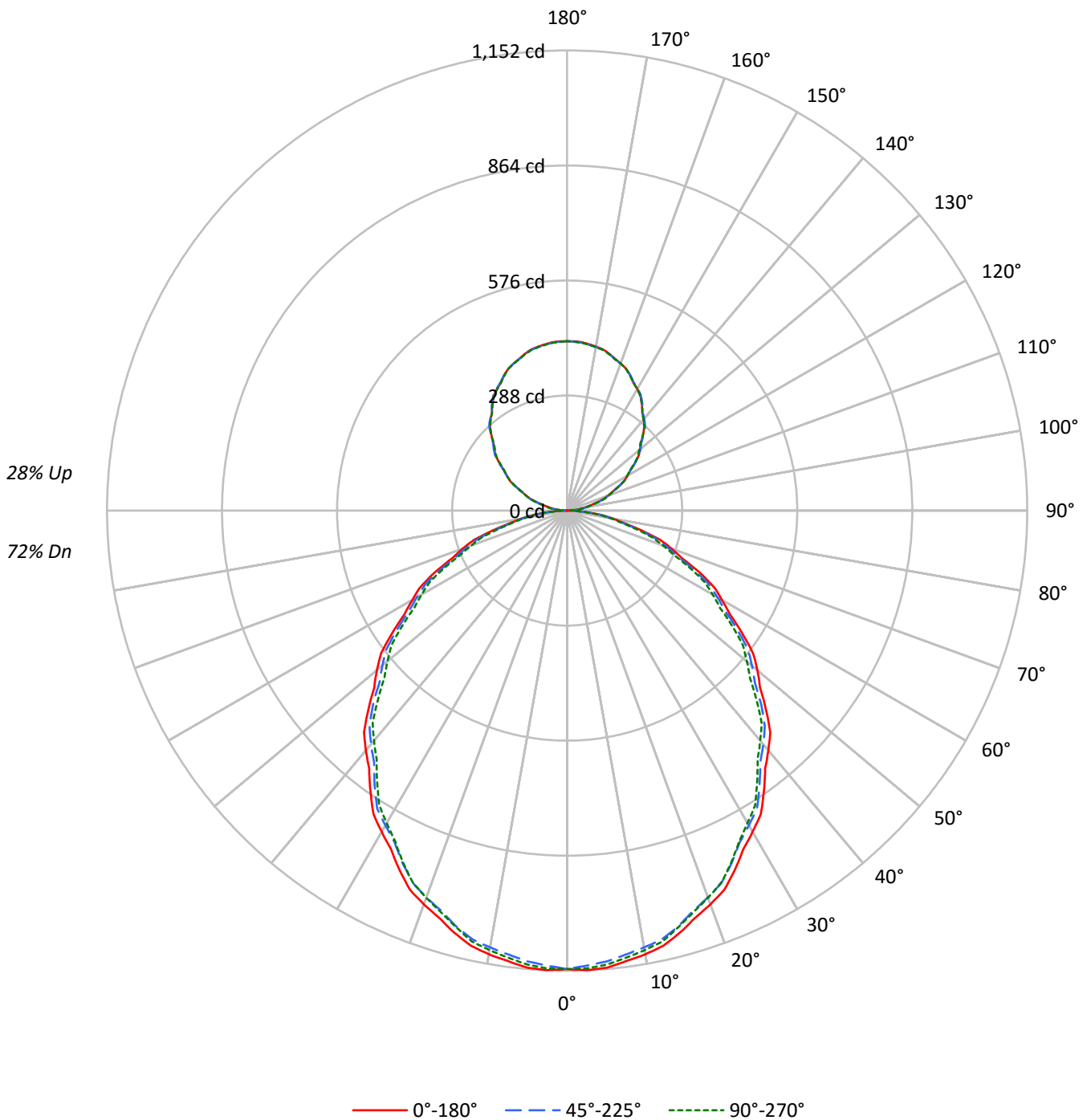
Input Watts (W): 35
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	112	112	112	112	106	106	106	106	95	95	95	85	85	85	76	76	76	72
1	103	98	94	90	97	93	89	86	84	81	78	75	73	71	67	66	64	60
2	93	86	79	74	88	81	76	71	73	69	65	66	62	59	59	56	54	50
3	85	75	68	61	80	72	65	59	65	59	55	58	54	50	52	49	46	43
4	78	67	58	52	74	64	56	50	58	51	47	52	47	43	47	43	40	37
5	72	60	51	45	68	57	49	43	52	45	40	47	41	37	42	38	34	32
6	66	54	45	39	62	51	43	38	47	40	35	42	37	33	38	34	30	28
7	61	48	40	34	58	46	39	33	42	36	31	39	33	29	35	30	27	25
8	57	44	36	31	54	42	35	30	39	32	28	35	30	26	32	28	24	22
9	53	40	33	27	50	39	32	27	36	29	25	33	27	23	30	25	22	20
10	50	37	30	25	47	36	29	24	33	27	23	30	25	21	28	23	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12355	12355	12355
5°	12413	12241	12327
10°	12329	12136	12211
15°	12186	11999	12021
20°	12016	11802	11813
25°	11792	11569	11545
30°	11543	11309	11225
35°	11284	11037	10893
40°	11011	10732	10568
45°	10712	10456	10201
50°	10412	10114	9833
55°	10021	9760	9466
60°	9623	9347	9052
65°	9276	8899	8621
70°	8759	8387	8013
75°	8006	7719	7390
80°	7221	6912	6856
85°	6336	6101	5854



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.1	2.6
10°-20°	305.3	7.3
20°-30°	451.0	10.8
30°-40°	526.8	12.7
40°-50°	529.6	12.7
50°-60°	465.2	11.2
60°-70°	346.6	8.3
70°-80°	197.5	4.7
80°-90°	57.9	1.4
90°-100°	27.6	0.7
100°-110°	82.7	2.0
110°-120°	140.6	3.4
120°-130°	185.0	4.4
130°-140°	207.9	5.0
140°-150°	204.4	4.9
150°-160°	172.0	4.1
160°-170°	114.5	2.8
170°-180°	40.1	1.0
0°-30°	864.4	20.8
0°-40°	1391.1	33.4
0°-60°	2385.9	57.3
0°-90°	2987.9	71.8
90°-120°	250.9	6.0
90°-150°	848.1	20.4
90°-180°	1175.0	28.2
0°-180°	4162.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1148	1148	1148	1148	1148	
5°	1149	1143	1133	1142	1141	109
15°	1094	1089	1077	1084	1079	308
25°	993	987	974	975	972	457
35°	859	852	840	834	829	537
45°	704	699	687	675	670	543
55°	534	532	520	510	504	478
65°	364	359	349	342	338	359
75°	192	189	186	181	178	206
85°	51	50	49	48	47	56
90°	0	4	8	9	10	4
95°	20	22	25	26	26	22
105°	75	76	79	79	79	80
115°	142	142	142	142	142	140
125°	207	208	208	206	205	185
135°	269	271	270	269	268	207
145°	326	327	328	327	326	204
155°	373	373	374	375	373	172
165°	407	406	406	408	405	115
175°	423	422	422	423	421	40
180°	424	424	424	424	424	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1147.8	1147.8	1147.8	1147.8	1147.8	1147.8	1147.8	1147.8	1147.8	1147.8	1147.8
2.5°	1151.7	1151.0	1150.4	1149.6	1149.0	1147.6	1145.7	1143.8	1141.8	1139.9	1141.6
5°	1148.8	1147.6	1146.6	1145.5	1144.3	1142.6	1140.2	1137.8	1135.4	1132.9	1135.2
7.5°	1137.6	1136.4	1135.3	1134.3	1133.1	1131.3	1128.8	1126.3	1123.8	1121.3	1123.3
10°	1128.0	1126.9	1125.9	1124.7	1123.7	1121.7	1118.8	1116.0	1113.1	1110.3	1112.3
12.5°	1115.4	1114.5	1113.6	1112.7	1111.7	1109.9	1107.3	1104.6	1101.9	1099.2	1100.7
15°	1093.5	1092.6	1091.7	1090.9	1090.0	1088.2	1085.2	1082.4	1079.6	1076.8	1078.5
17.5°	1068.0	1066.9	1065.7	1064.6	1063.5	1061.5	1058.7	1055.7	1052.9	1050.1	1051.3
20°	1049.0	1047.7	1046.5	1045.2	1043.9	1041.7	1038.9	1036.0	1033.2	1030.3	1031.2
22.5°	1027.7	1026.4	1025.1	1023.8	1022.5	1020.4	1017.6	1014.7	1011.9	1009.0	1009.7
25°	992.9	991.6	990.2	988.9	987.6	985.5	982.6	979.8	976.9	974.1	974.3
27.5°	955.5	954.2	953.0	951.7	950.5	948.3	945.2	942.2	939.1	935.9	936.1
30°	928.7	927.6	926.5	925.4	924.3	922.2	919.2	916.1	913.0	909.9	909.9
32.5°	901.8	900.4	898.9	897.5	896.1	894.2	891.7	889.4	887.0	884.7	883.4
35°	858.7	857.3	856.0	854.7	853.4	851.3	848.4	845.6	842.7	839.9	838.6
37.5°	814.4	812.8	811.1	809.4	807.8	805.5	802.6	799.7	796.7	793.9	792.3
40°	783.6	782.3	781.0	779.7	778.4	776.2	773.1	770.1	766.9	763.8	762.1
42.5°	752.8	751.3	749.8	748.4	746.9	744.6	741.5	738.4	735.4	732.3	730.6
45°	703.7	702.8	701.9	701.1	700.1	698.3	695.4	692.6	689.8	686.9	684.3
47.5°	654.9	653.7	652.3	651.1	649.8	647.8	645.2	642.5	639.8	637.2	634.5
50°	621.8	620.7	619.5	618.5	617.4	615.4	612.6	609.7	606.8	604.0	601.6
52.5°	587.0	586.3	585.5	584.8	584.0	582.1	579.1	576.1	573.1	570.0	568.0
55°	534.0	533.7	533.5	533.3	533.0	531.5	528.7	525.8	522.9	520.1	517.7
57.5°	483.4	482.7	481.9	481.2	480.4	478.9	476.6	474.3	472.0	469.8	467.6
60°	447.0	446.9	446.7	446.4	446.2	444.8	442.1	439.5	436.9	434.2	432.3
62.5°	414.7	414.2	413.6	413.0	412.5	410.9	408.2	405.6	402.9	400.3	398.3
65°	364.2	363.1	361.9	360.9	359.8	358.2	355.9	353.7	351.6	349.4	347.6
67.5°	310.7	309.7	308.8	307.7	306.8	305.5	303.9	302.2	300.5	298.9	297.3
70°	278.3	277.0	275.7	274.4	273.1	271.7	270.4	269.1	267.8	266.5	264.9
72.5°	244.4	243.4	242.4	241.5	240.5	239.3	237.8	236.3	234.8	233.3	232.0
75°	192.5	191.5	190.7	189.8	189.0	188.1	187.5	186.8	186.2	185.6	184.5
77.5°	146.5	146.0	145.5	145.1	144.5	143.9	143.1	142.3	141.6	140.7	140.0
80°	116.5	115.8	115.2	114.5	113.9	113.3	112.8	112.4	112.0	111.5	111.3
82.5°	87.3	87.1	87.0	86.8	86.7	86.6	86.5	86.4	86.3	86.2	85.9
85°	51.3	50.9	50.4	50.0	49.6	49.4	49.4	49.4	49.4	49.4	48.9
87.5°	20.5	20.2	19.8	19.4	19.0	18.9	18.9	18.9	18.9	18.9	18.9
90°	0.4	1.0	1.8	2.5	3.3	4.1	5.1	6.0	7.1	8.0	8.3
92.5°	8.1	8.6	9.0	9.6	10.1	10.6	11.1	11.7	12.3	12.8	13.0
95°	19.7	20.2	20.6	21.2	21.7	22.2	22.9	23.5	24.0	24.7	25.0
97.5°	34.9	35.3	35.7	36.1	36.5	36.9	37.3	37.7	38.2	38.5	38.9
100°	45.3	45.7	46.2	46.7	47.0	47.5	47.9	48.3	48.6	48.9	49.2
102.5°	57.3	57.6	57.8	58.1	58.3	58.7	59.2	59.8	60.2	60.7	60.9
105°	74.9	75.1	75.2	75.4	75.5	76.0	76.6	77.3	77.9	78.6	78.6
107.5°	95.5	95.6	95.7	95.8	95.9	96.0	96.2	96.5	96.8	97.1	97.3
110°	108.3	108.4	108.6	108.7	108.9	109.0	109.1	109.3	109.4	109.6	109.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	121.6	121.7	121.8	121.9	122.0	122.0	122.1	122.1	122.1	122.2	122.4
115°	141.6	141.8	142.0	142.2	142.4	142.5	142.3	142.2	142.0	141.9	141.9
117.5°	161.6	161.8	162.0	162.1	162.3	162.2	162.0	161.8	161.6	161.5	161.5
120°	174.2	174.7	175.1	175.5	176.0	176.0	175.7	175.3	174.9	174.6	174.5
122.5°	187.3	187.6	187.9	188.2	188.6	188.6	188.4	188.2	188.0	187.8	187.7
125°	207.2	207.4	207.6	207.8	208.1	208.1	207.9	207.8	207.6	207.5	207.2
127.5°	225.6	226.0	226.5	227.0	227.4	227.6	227.4	227.2	227.2	227.0	226.6
130°	237.8	238.4	239.0	239.6	240.2	240.3	240.2	240.0	239.7	239.5	239.2
132.5°	250.1	250.7	251.3	251.8	252.4	252.7	252.5	252.3	252.1	252.0	251.7
135°	268.8	269.3	269.7	270.1	270.6	270.8	270.7	270.6	270.5	270.5	270.1
137.5°	286.2	286.5	286.8	287.2	287.6	287.9	288.0	288.2	288.4	288.6	288.3
140°	298.1	298.5	298.9	299.3	299.6	299.8	299.9	299.9	300.0	300.1	300.0
142.5°	309.1	309.4	309.8	310.2	310.5	310.8	310.9	311.0	311.1	311.3	311.2
145°	326.1	326.2	326.4	326.5	326.7	326.9	327.1	327.3	327.5	327.7	327.7
147.5°	341.0	341.3	341.6	341.9	342.0	342.3	342.5	342.7	342.9	343.2	343.2
150°	351.4	351.6	351.7	351.9	352.0	352.1	352.3	352.4	352.6	352.7	352.7
152.5°	360.0	360.1	360.3	360.5	360.8	360.9	361.0	361.1	361.2	361.3	361.4
155°	373.4	373.4	373.4	373.4	373.4	373.4	373.5	373.5	373.6	373.7	374.0
157.5°	384.8	384.7	384.7	384.6	384.5	384.5	384.6	384.6	384.7	384.7	385.0
160°	392.0	391.9	391.7	391.6	391.4	391.3	391.3	391.3	391.3	391.3	391.7
162.5°	398.4	398.2	398.0	397.8	397.6	397.6	397.6	397.7	397.8	397.8	398.1
165°	406.7	406.5	406.2	406.0	405.8	405.7	405.7	405.7	405.7	405.7	406.1
167.5°	413.3	413.0	412.7	412.4	412.1	412.0	412.1	412.1	412.2	412.3	412.6
170°	417.0	416.7	416.4	416.1	415.8	415.7	415.7	415.7	415.7	415.7	416.2
172.5°	420.0	419.6	419.3	419.1	418.8	418.6	418.6	418.6	418.6	418.6	419.1
175°	423.0	422.7	422.4	422.2	421.9	421.7	421.7	421.7	421.7	421.7	422.2
177.5°	424.2	424.0	423.8	423.6	423.3	423.2	423.2	423.2	423.2	423.2	423.6
180°	424.0	424.0	424.0	424.0	424.0	424.0	424.0	424.0	424.0	424.0	424.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1147.8	1147.8	1147.8	1147.8	1147.8	1147.8	1147.8	1147.8
2.5°	1143.4	1145.2	1146.9	1147.7	1147.5	1147.4	1147.2	1147.0
5°	1137.4	1139.5	1141.8	1142.6	1142.2	1141.8	1141.3	1140.9
7.5°	1125.3	1127.3	1129.3	1130.1	1129.8	1129.5	1129.3	1129.1
10°	1114.3	1116.2	1118.1	1119.0	1118.5	1118.0	1117.7	1117.2
12.5°	1102.1	1103.5	1105.0	1105.6	1105.3	1105.0	1104.8	1104.6
15°	1080.2	1081.9	1083.7	1083.9	1082.6	1081.3	1080.1	1078.7
17.5°	1052.5	1053.8	1055.0	1055.4	1054.9	1054.4	1054.0	1053.5
20°	1032.1	1032.9	1033.9	1034.0	1033.3	1032.6	1032.0	1031.3
22.5°	1010.4	1011.2	1011.8	1011.7	1011.0	1010.1	1009.3	1008.4
25°	974.5	974.8	975.0	974.8	974.1	973.5	972.8	972.1
27.5°	936.3	936.5	936.7	936.3	935.6	934.7	933.9	933.0
30°	909.9	909.9	909.9	909.2	907.7	906.1	904.6	903.1
32.5°	882.2	881.0	879.8	878.7	877.9	877.0	876.2	875.4
35°	837.3	835.9	834.6	833.4	832.3	831.2	830.1	829.0
37.5°	790.7	789.1	787.6	786.5	785.7	785.0	784.3	783.6
40°	760.3	758.7	756.9	755.5	754.7	753.8	752.9	752.1
42.5°	728.8	727.0	725.3	724.0	723.1	722.2	721.3	720.5
45°	681.6	679.0	676.4	674.5	673.4	672.3	671.2	670.1
47.5°	632.0	629.4	626.8	625.0	624.1	623.1	622.2	621.1
50°	599.2	596.7	594.4	592.5	591.2	589.8	588.5	587.2
52.5°	565.9	563.8	561.8	560.2	558.8	557.5	556.2	554.9
55°	515.3	512.8	510.5	508.7	507.6	506.5	505.4	504.4
57.5°	465.4	463.4	461.2	459.5	458.2	456.9	455.6	454.4
60°	430.3	428.3	426.3	424.8	423.7	422.6	421.5	420.5
62.5°	396.3	394.4	392.4	391.1	390.3	389.6	388.8	388.0
65°	345.8	344.1	342.3	341.1	340.4	339.8	339.1	338.5
67.5°	295.8	294.3	292.7	291.4	290.6	289.6	288.7	287.8
70°	263.4	261.8	260.3	259.0	257.9	256.8	255.7	254.6
72.5°	230.5	229.2	227.9	226.9	226.3	225.7	225.2	224.6
75°	183.3	182.3	181.2	180.3	179.6	179.0	178.3	177.7
77.5°	139.2	138.5	137.7	137.4	137.4	137.4	137.4	137.4
80°	111.1	110.8	110.7	110.6	110.6	110.6	110.6	110.6
82.5°	85.5	85.1	84.6	84.4	84.3	84.1	83.9	83.7
85°	48.4	48.1	47.6	47.4	47.4	47.4	47.4	47.4
87.5°	18.8	18.7	18.5	18.5	18.5	18.5	18.6	18.6
90°	8.6	8.9	9.1	9.4	9.5	9.7	9.8	10.0
92.5°	13.3	13.5	13.8	13.9	13.8	13.7	13.6	13.5
95°	25.3	25.5	25.8	26.0	26.0	26.0	26.0	26.0
97.5°	39.2	39.6	40.0	40.1	40.1	40.1	40.0	40.0
100°	49.4	49.7	49.9	50.0	50.1	50.3	50.5	50.6
102.5°	61.2	61.4	61.5	61.6	61.6	61.6	61.5	61.5
105°	78.6	78.6	78.6	78.7	78.8	79.0	79.2	79.3
107.5°	97.6	97.7	98.0	98.1	98.0	97.9	97.8	97.7
110°	110.2	110.5	110.7	110.8	110.7	110.6	110.4	110.3



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CATALOG NUMBER: S123DIP-S775D365U830-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	122.8	123.2	123.6	123.7	123.7	123.7	123.6	123.6
115°	142.0	142.1	142.2	142.2	142.1	142.0	141.9	141.9
117.5°	161.5	161.5	161.5	161.3	161.1	160.9	160.7	160.5
120°	174.4	174.3	174.3	174.1	174.0	173.8	173.7	173.5
122.5°	187.5	187.3	187.1	186.9	186.7	186.4	186.2	186.1
125°	206.9	206.6	206.3	206.0	205.8	205.5	205.1	204.8
127.5°	226.1	225.7	225.3	224.9	224.6	224.2	223.9	223.6
130°	238.9	238.6	238.3	237.9	237.4	236.9	236.4	235.8
132.5°	251.3	250.9	250.6	250.2	249.8	249.4	249.0	248.6
135°	269.8	269.6	269.3	269.1	268.9	268.7	268.6	268.4
137.5°	288.0	287.8	287.4	287.1	286.8	286.5	286.3	286.0
140°	299.9	299.9	299.8	299.5	299.0	298.5	297.9	297.5
142.5°	311.1	311.0	311.0	310.8	310.4	310.0	309.5	309.2
145°	327.6	327.5	327.4	327.3	327.0	326.7	326.4	326.1
147.5°	343.2	343.2	343.2	342.9	342.5	342.0	341.6	341.1
150°	352.7	352.7	352.7	352.5	352.0	351.7	351.2	350.7
152.5°	361.5	361.7	361.7	361.6	361.2	360.8	360.4	360.1
155°	374.3	374.6	374.9	374.8	374.3	373.7	373.2	372.7
157.5°	385.3	385.7	386.0	385.9	385.5	385.1	384.7	384.3
160°	392.1	392.5	392.9	392.9	392.6	392.3	392.0	391.7
162.5°	398.5	398.9	399.3	399.2	398.7	398.2	397.8	397.3
165°	406.6	407.0	407.5	407.5	406.9	406.4	405.9	405.4
167.5°	413.1	413.6	414.1	414.1	413.6	413.1	412.6	412.3
170°	416.7	417.3	417.7	417.7	417.3	416.7	416.2	415.7
172.5°	419.5	420.0	420.5	420.5	419.9	419.4	418.9	418.4
175°	422.5	423.0	423.5	423.4	422.9	422.4	421.9	421.3
177.5°	424.0	424.2	424.6	424.6	424.2	423.8	423.4	422.9
180°	424.0	424.0	424.0	424.0	424.0	424.0	424.0	424.0

(END OF REPORT)