

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: P331972-830

Luminaire Tested: **S123DIP-S775D585U830-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331972-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S775D585U830-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 585 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4986.8 lumens
Efficiency: N/A
Efficacy: 123.7 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: General Diffuse

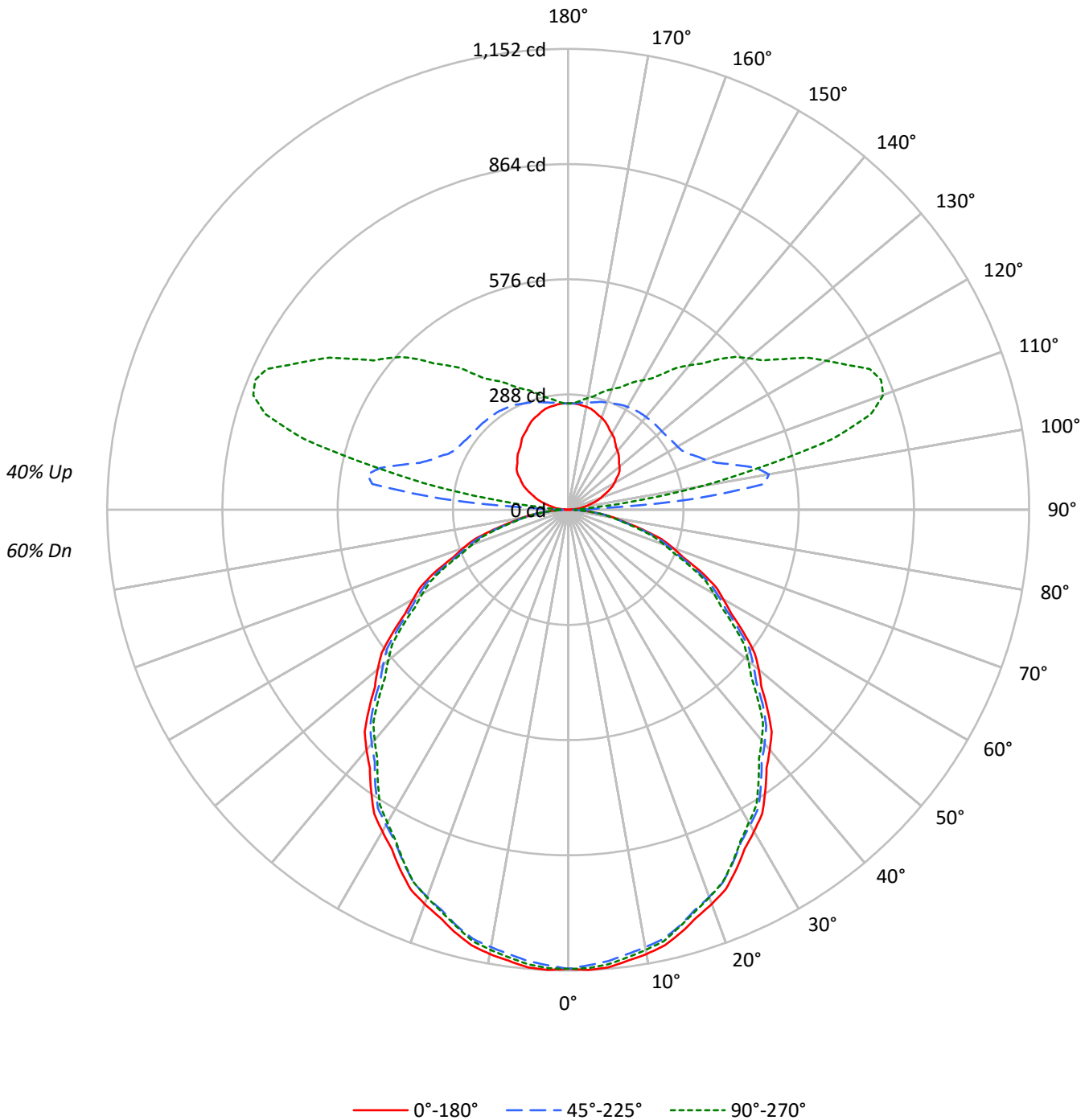
Input Watts (W): 40.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	110	110	110	110	102	102	102	102	89	89	89	77	77	77	65	65	65	60
1	100	96	92	88	93	89	86	83	78	75	73	67	65	64	58	56	55	50
2	91	83	77	72	85	78	73	68	68	64	60	59	56	53	51	48	46	42
3	83	73	66	60	77	69	62	57	60	55	51	52	48	45	45	42	39	36
4	76	65	57	51	71	61	54	48	53	48	43	47	42	38	40	37	34	31
5	70	58	50	43	65	54	47	41	48	42	37	42	37	33	36	32	30	26
6	64	52	44	38	60	49	41	36	43	37	33	38	33	29	33	29	26	23
7	59	47	39	33	55	44	37	32	39	33	29	34	30	26	30	26	23	21
8	55	43	35	29	52	40	33	28	36	30	26	31	27	23	27	24	21	18
9	51	39	31	26	48	37	30	25	33	27	23	29	24	21	25	22	19	17
10	48	36	28	24	45	34	27	23	30	25	21	27	22	19	24	20	17	15

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	2.2
10°-20°	305.3	6.1
20°-30°	451.0	9.0
30°-40°	526.8	10.6
40°-50°	529.6	10.6
50°-60°	465.2	9.3
60°-70°	346.6	6.9
70°-80°	197.5	4.0
80°-90°	58.7	1.2
90°-100°	147.8	3.0
100°-110°	418.5	8.4
110°-120°	411.7	8.3
120°-130°	328.4	6.6
130°-140°	258.9	5.2
140°-150°	193.2	3.9
150°-160°	134.7	2.7
160°-170°	79.1	1.6
170°-180°	25.7	0.5
0°-30°	864.4	17.3
0°-40°	1391.1	27.9
0°-60°	2385.9	47.8
0°-90°	2988.7	59.9
90°-120°	978.0	19.6
90°-150°	1758.5	35.3
90°-180°	1998.0	40.1
0°-180°	4986.8	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°	1	6	14	15	16	4
95°	18	59	319	93	62	20
105°	62	92	432	756	684	66
115°	110	137	331	725	832	109
125°	153	181	309	559	656	136
135°	180	214	304	460	532	139
145°	205	235	300	378	416	128
155°	233	251	291	331	345	107
165°	254	262	278	295	300	72
175°	265	265	267	271	270	25
180°	266	266	266	266	266	



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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°	20.7	20.5	20.1	19.9	19.6	19.5	19.6	19.8	19.9	20.1	19.8
90°	1.0	2.2	3.2	4.8	5.9	7.0	8.6	10.2	11.8	13.5	12.9
92.5°	6.7	9.9	14.4	18.6	23.1	31.1	45.1	68.2	91.0	82.7	62.4
95°	18.3	19.9	25.8	35.0	48.9	69.8	115.6	195.7	283.9	318.8	258.5
97.5°	31.2	31.8	36.4	44.3	58.1	80.8	124.4	214.7	361.7	494.1	528.6
100°	39.8	40.3	44.1	51.7	64.5	85.5	123.1	202.6	344.0	509.1	615.0
102.5°	48.8	49.8	53.2	60.2	71.8	91.0	124.8	192.4	318.3	481.2	619.3
105°	62.4	64.0	67.2	73.6	83.9	100.6	129.6	184.9	286.5	432.3	586.5
107.5°	76.7	78.4	81.5	87.8	97.5	112.9	138.4	184.4	266.4	389.0	529.1
110°	87.1	88.7	91.4	97.3	106.4	121.5	145.7	186.5	258.5	364.5	492.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	96.5	98.2	100.9	106.8	115.9	130.5	153.0	190.9	254.3	348.2	461.6
115°	110.2	112.4	115.6	120.9	130.1	144.6	165.0	197.8	252.7	330.6	423.7
117.5°	123.9	126.3	129.0	133.9	144.2	157.6	177.9	207.1	253.6	320.3	400.8
120°	133.4	135.0	137.6	143.0	153.3	166.6	186.0	214.0	255.3	315.6	388.7
122.5°	141.5	143.1	145.8	151.6	161.4	175.7	194.6	220.5	258.4	312.5	378.8
125°	153.3	154.3	157.5	163.4	173.6	188.1	207.0	230.6	262.9	308.6	366.1
127.5°	162.1	163.7	167.8	173.7	185.0	199.5	217.7	239.0	268.1	306.6	355.0
130°	167.8	169.4	174.2	180.6	191.9	206.4	224.1	244.6	271.5	305.4	348.9
132.5°	172.0	174.1	179.4	187.1	198.4	212.4	229.8	249.8	274.1	304.9	343.3
135°	179.6	181.7	187.7	195.7	207.0	221.5	238.2	256.5	278.0	304.3	336.0
137.5°	186.6	188.9	194.7	203.3	214.5	227.9	243.9	261.4	280.5	303.1	329.7
140°	191.4	194.1	199.4	208.0	218.8	232.2	247.8	264.0	282.2	302.7	325.7
142.5°	196.5	198.8	204.6	212.4	223.1	235.7	250.8	266.6	283.5	301.8	322.3
145°	204.8	206.4	211.3	219.3	228.5	240.8	254.9	269.4	284.4	300.5	317.7
147.5°	213.2	214.1	219.0	225.9	234.7	245.2	258.1	271.1	284.4	298.5	313.2
150°	218.8	219.3	223.7	230.6	238.2	247.8	260.2	271.5	284.4	296.7	310.2
152.5°	224.4	224.5	228.8	235.0	241.6	250.8	261.5	272.4	283.1	294.6	306.8
155°	232.8	232.8	236.0	241.4	247.3	254.9	264.0	272.6	281.7	290.9	301.6
157.5°	239.4	239.9	242.4	247.2	252.2	258.1	265.3	273.1	279.8	287.5	295.8
160°	244.6	244.6	246.8	251.1	254.9	260.2	266.6	273.1	279.0	284.9	291.9
162.5°	248.5	248.5	250.2	253.6	256.9	261.5	267.1	272.7	277.3	282.4	288.0
165°	254.3	253.7	254.9	257.5	259.7	263.4	267.7	271.5	274.8	278.5	282.8
167.5°	258.7	258.1	258.5	260.6	262.1	264.5	267.6	270.6	272.1	274.6	277.8
170°	261.3	260.2	260.7	262.3	263.4	264.5	267.2	269.4	270.4	272.0	274.8
172.5°	263.0	262.3	262.5	263.6	264.3	264.9	267.2	268.9	269.1	269.8	271.7
175°	265.0	264.5	264.0	265.0	265.0	265.6	266.6	267.7	267.2	267.2	268.2
177.5°	266.0	265.6	265.1	265.6	265.6	265.6	266.0	266.8	266.0	265.6	266.0
180°	265.6	265.6	265.6	265.6	265.6	265.6	265.6	265.6	265.6	265.6	265.6



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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°	19.7	19.6	19.6	19.7	19.6	19.7	19.8	19.7
90°	13.5	13.9	14.5	15.6	15.1	15.6	16.1	15.6
92.5°	45.2	35.9	31.8	28.9	28.0	26.3	26.9	25.9
95°	193.5	131.2	102.6	83.3	73.1	68.2	64.5	62.4
97.5°	482.5	386.4	317.1	252.8	213.1	188.9	174.4	169.8
100°	633.9	590.3	527.4	451.0	396.7	357.5	336.6	337.1
102.5°	684.2	682.8	646.1	597.7	555.4	524.3	506.8	494.5
105°	698.9	752.6	762.9	748.9	724.2	703.7	686.5	683.8
107.5°	656.5	743.9	790.9	810.0	810.5	803.6	797.8	792.9
110°	616.0	715.0	782.8	820.4	835.5	839.7	838.7	837.5



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CATALOG NUMBER: S123DIP-S775D585U830-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	576.1	677.1	753.1	801.4	829.0	842.4	846.4	846.6
115°	523.1	616.6	695.7	754.2	794.6	818.2	829.0	831.7
117.5°	484.7	565.4	636.4	695.9	737.9	765.0	780.5	784.1
120°	464.5	537.1	601.5	655.9	698.3	728.5	741.3	744.6
122.5°	448.6	514.3	574.0	624.4	662.2	689.3	703.5	707.6
125°	427.3	486.0	537.6	580.6	615.0	638.7	652.1	655.9
127.5°	408.9	461.2	507.7	546.9	577.5	597.7	609.8	613.3
130°	397.3	445.6	489.2	525.8	554.3	573.6	584.9	589.2
132.5°	386.5	431.0	471.6	506.4	533.2	552.5	562.5	565.5
135°	372.0	410.2	445.2	475.8	502.1	518.2	527.9	531.7
137.5°	358.8	390.1	420.2	446.8	468.9	485.2	493.4	495.9
140°	351.1	378.4	404.3	427.3	447.8	462.9	471.5	470.9
142.5°	343.7	367.3	389.6	409.7	427.2	440.5	448.3	447.7
145°	334.9	352.7	369.9	385.5	398.9	410.2	414.5	415.6
147.5°	327.7	341.8	355.7	366.7	376.9	384.6	388.7	389.1
150°	322.5	334.9	346.2	356.5	364.5	370.4	373.6	373.6
152.5°	317.8	328.5	338.5	346.9	353.3	358.8	360.7	360.7
155°	310.8	319.3	327.4	333.8	338.7	343.0	344.0	344.6
157.5°	303.2	310.4	316.7	321.7	325.9	329.1	330.0	329.9
160°	298.9	304.8	310.2	314.0	317.7	320.9	320.9	320.4
162.5°	293.8	298.8	303.8	307.1	309.5	312.4	312.4	311.8
165°	287.1	290.3	294.1	296.7	298.9	301.0	300.5	300.5
167.5°	281.3	283.7	285.9	287.9	288.8	290.3	289.7	289.7
170°	277.4	279.0	281.2	282.2	282.8	283.9	283.3	283.3
172.5°	274.0	275.1	276.8	277.5	277.6	278.7	277.8	277.3
175°	269.4	269.8	271.0	271.0	271.0	271.5	271.0	270.4
177.5°	266.5	266.8	267.3	267.3	266.8	267.3	266.5	266.5
180°	265.6	265.6	265.6	265.6	265.6	265.6	265.6	265.6

(END OF REPORT)