

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: P331963

Luminaire Tested: **S123DIP-S775D365U835-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331963
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-S775D365U835-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

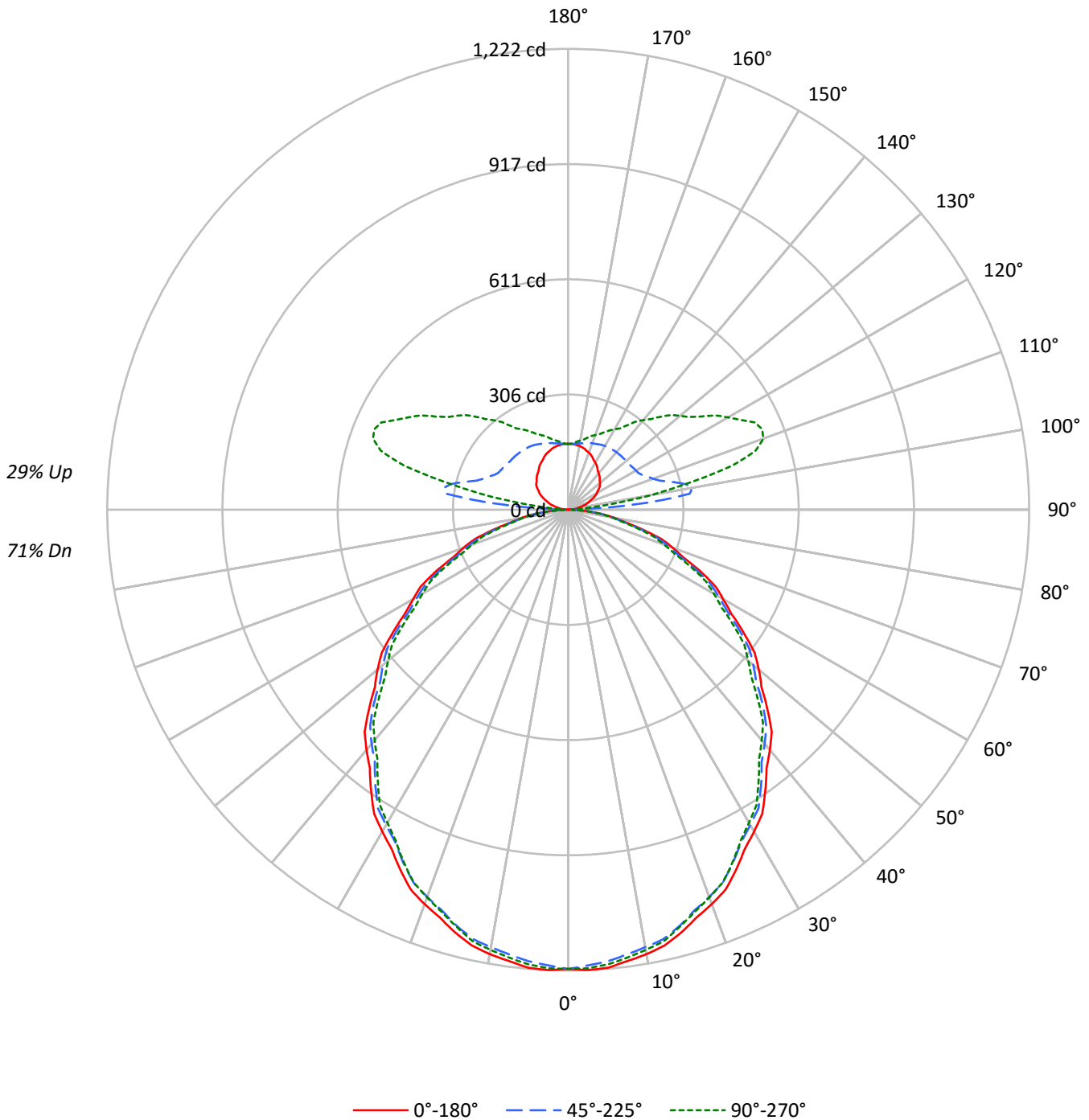
Lumens per Lamp: N/A
Luminaire Lumens: 4483.5 lumens
Efficiency: N/A
Efficacy: 128.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 35
Input Voltage (V): 120
Input Current (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	112	112	112	112	106	106	106	106	95	95	95	85	85	85	75	75	75	71
1	102	98	94	90	97	93	89	86	83	80	78	74	72	70	66	65	63	59
2	93	85	79	74	88	81	75	71	73	68	64	65	62	59	58	56	53	50
3	85	75	67	61	80	71	64	59	64	59	54	58	53	50	52	48	45	42
4	78	67	58	52	73	63	56	50	57	51	46	51	47	43	46	42	39	36
5	72	59	51	45	67	57	49	43	51	45	40	46	41	37	42	37	34	31
6	66	53	45	39	62	51	43	38	46	40	35	42	37	32	38	33	30	27
7	61	48	40	34	58	46	39	33	42	36	31	38	33	29	34	30	27	24
8	57	44	36	30	54	42	35	29	38	32	28	35	30	26	32	27	24	22
9	53	40	33	27	50	39	31	26	35	29	25	32	27	23	29	25	22	20
10	50	37	30	25	47	36	29	24	33	27	22	30	25	21	27	23	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13108	13108	13108
5°	13169	12988	13078
10°	13081	12875	12955
15°	12929	12730	12754
20°	12749	12521	12534
25°	12511	12275	12250
30°	12246	11999	11908
35°	11971	11709	11557
40°	11682	11387	11212
45°	11365	11094	10823
50°	11047	10731	10433
55°	10631	10355	10042
60°	10211	9918	9604
65°	9841	9442	9146
70°	9294	8897	8500
75°	8492	8189	7839
80°	7662	7333	7271
85°	6719	6472	6212



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.7	2.6
10°-20°	323.9	7.2
20°-30°	478.4	10.7
30°-40°	558.9	12.5
40°-50°	561.9	12.5
50°-60°	493.6	11.0
60°-70°	367.7	8.2
70°-80°	209.5	4.7
80°-90°	61.5	1.4
90°-100°	97.2	2.2
100°-110°	275.1	6.1
110°-120°	270.6	6.0
120°-130°	215.9	4.8
130°-140°	170.2	3.8
140°-150°	127.0	2.8
150°-160°	88.5	2.0
160°-170°	52.0	1.2
170°-180°	16.9	0.4
0°-30°	917.1	20.5
0°-40°	1475.9	32.9
0°-60°	2531.4	56.5
0°-90°	3170.1	70.7
90°-120°	642.9	14.3
90°-150°	1155.9	25.8
90°-180°	1313.0	29.3
0°-180°	4483.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1218	1218	1218	1218	1218	
5°	1219	1213	1202	1212	1210	115
15°	1160	1155	1142	1150	1144	327
25°	1053	1047	1034	1034	1031	485
35°	911	904	891	885	880	570
45°	747	742	729	717	711	576
55°	566	565	552	541	535	507
65°	386	381	371	363	359	381
75°	204	200	197	192	188	218
85°	54	52	52	50	50	60
90°	1	4	9	10	10	4
95°	12	39	210	61	41	13
105°	41	61	284	497	450	44
115°	72	90	217	477	547	72
125°	101	119	203	368	431	89
135°	118	141	200	303	350	91
145°	135	154	198	248	273	84
155°	153	165	191	217	226	70
165°	167	172	183	194	198	47
175°	174	174	176	178	178	17
180°	175	175	175	175	175	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1217.8	1217.8	1217.8	1217.8	1217.8	1217.8	1217.8	1217.8	1217.8	1217.8	1217.8
2.5°	1221.9	1221.2	1220.5	1219.7	1219.0	1217.6	1215.5	1213.5	1211.4	1209.4	1211.2
5°	1218.8	1217.6	1216.5	1215.3	1214.1	1212.3	1209.7	1207.2	1204.6	1202.0	1204.4
7.5°	1206.9	1205.7	1204.5	1203.4	1202.2	1200.3	1197.6	1195.0	1192.3	1189.7	1191.8
10°	1196.8	1195.6	1194.5	1193.3	1192.2	1190.1	1187.0	1184.0	1181.0	1178.0	1180.1
12.5°	1183.4	1182.4	1181.5	1180.5	1179.5	1177.6	1174.8	1171.9	1169.1	1166.2	1167.8
15°	1160.2	1159.2	1158.3	1157.4	1156.4	1154.5	1151.4	1148.4	1145.4	1142.4	1144.2
17.5°	1133.1	1131.9	1130.7	1129.5	1128.3	1126.2	1123.2	1120.1	1117.1	1114.1	1115.4
20°	1113.0	1111.6	1110.3	1108.9	1107.5	1105.2	1102.2	1099.2	1096.2	1093.1	1094.1
22.5°	1090.4	1089.0	1087.6	1086.2	1084.8	1082.6	1079.6	1076.6	1073.6	1070.5	1071.3
25°	1053.4	1052.0	1050.6	1049.2	1047.8	1045.6	1042.5	1039.5	1036.5	1033.5	1033.7
27.5°	1013.8	1012.4	1011.1	1009.7	1008.4	1006.1	1002.8	999.6	996.3	993.0	993.2
30°	985.3	984.1	983.0	981.8	980.6	978.4	975.2	971.9	968.7	965.4	965.4
32.5°	956.8	955.3	953.7	952.2	950.7	948.7	946.1	943.6	941.1	938.6	937.3
35°	911.0	909.6	908.2	906.8	905.4	903.2	900.1	897.1	894.1	891.1	889.7
37.5°	864.0	862.3	860.5	858.7	857.0	854.6	851.5	848.4	845.3	842.3	840.6
40°	831.4	830.0	828.6	827.2	825.8	823.5	820.2	817.0	813.7	810.4	808.6
42.5°	798.7	797.1	795.5	794.0	792.4	790.0	786.7	783.4	780.2	776.9	775.1
45°	746.6	745.6	744.7	743.8	742.8	740.9	737.8	734.8	731.8	728.8	726.0
47.5°	694.8	693.5	692.1	690.8	689.4	687.3	684.5	681.7	678.8	676.0	673.2
50°	659.7	658.5	657.3	656.2	655.0	652.9	649.9	646.9	643.8	640.8	638.3
52.5°	622.8	622.0	621.2	620.4	619.6	617.6	614.4	611.2	608.0	604.8	602.6
55°	566.5	566.2	566.0	565.8	565.5	563.9	560.9	557.9	554.8	551.8	549.3
57.5°	512.9	512.1	511.3	510.5	509.7	508.1	505.7	503.2	500.8	498.4	496.1
60°	474.3	474.1	473.9	473.6	473.4	471.9	469.1	466.3	463.5	460.7	458.6
62.5°	440.0	439.4	438.8	438.2	437.6	435.9	433.1	430.3	427.5	424.7	422.6
65°	386.4	385.2	384.0	382.9	381.7	380.0	377.6	375.3	373.0	370.7	368.8
67.5°	329.6	328.6	327.6	326.5	325.5	324.1	322.4	320.6	318.8	317.1	315.4
70°	295.3	293.9	292.5	291.1	289.7	288.3	286.9	285.5	284.1	282.7	281.1
72.5°	259.3	258.2	257.2	256.2	255.2	253.9	252.3	250.7	249.1	247.5	246.1
75°	204.2	203.2	202.3	201.4	200.5	199.6	198.9	198.2	197.5	196.9	195.7
77.5°	155.4	154.9	154.4	153.9	153.3	152.7	151.8	151.0	150.2	149.3	148.5
80°	123.6	122.9	122.2	121.5	120.8	120.2	119.7	119.3	118.8	118.3	118.1
82.5°	92.6	92.4	92.3	92.1	92.0	91.9	91.8	91.7	91.6	91.5	91.1
85°	54.4	54.0	53.5	53.1	52.6	52.4	52.4	52.4	52.4	52.4	51.9
87.5°	21.9	21.5	21.1	20.7	20.3	20.1	20.1	20.1	20.2	20.2	19.9
90°	0.7	1.4	2.1	3.2	3.9	4.6	5.7	6.7	7.8	8.8	8.5
92.5°	4.4	6.5	9.5	12.2	15.2	20.4	29.7	44.9	59.8	54.3	41.0
95°	12.0	13.1	17.0	23.0	32.2	45.9	76.0	128.6	186.6	209.6	170.0
97.5°	20.5	20.8	23.9	29.1	38.2	53.1	81.8	141.1	237.8	324.8	347.4
100°	26.2	26.5	29.0	33.9	42.4	56.2	80.9	133.2	226.2	334.7	404.3
102.5°	32.1	32.7	34.9	39.6	47.2	59.9	82.1	126.4	209.2	316.3	407.1
105°	41.0	42.1	44.2	48.4	55.1	66.1	85.2	121.6	188.4	284.1	385.5
107.5°	50.5	51.5	53.6	57.7	64.0	74.2	91.0	121.2	175.1	255.7	347.8
110°	57.2	58.3	60.1	64.0	70.0	79.9	95.8	122.6	170.0	239.6	324.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	63.5	64.5	66.3	70.2	76.2	85.8	100.6	125.5	167.1	228.8	303.4
115°	72.4	73.9	76.0	79.5	85.5	95.1	108.5	130.0	166.1	217.3	278.5
117.5°	81.4	83.0	84.8	88.1	94.8	103.6	116.9	136.1	166.7	210.5	263.4
120°	87.6	88.7	90.5	94.0	100.7	109.5	122.3	140.6	167.9	207.4	255.5
122.5°	93.0	94.1	95.8	99.7	106.1	115.5	127.9	144.9	169.8	205.5	249.0
125°	100.7	101.4	103.5	107.4	114.1	123.7	136.1	151.6	172.8	202.8	240.7
127.5°	106.6	107.6	110.3	114.2	121.6	131.2	143.1	157.1	176.2	201.6	233.3
130°	110.3	111.3	114.5	118.7	126.2	135.7	147.4	160.8	178.5	200.7	229.3
132.5°	113.1	114.4	117.9	123.0	130.4	139.7	151.0	164.2	180.2	200.4	225.7
135°	118.0	119.4	123.3	128.6	136.1	145.6	156.5	168.6	182.7	200.0	220.9
137.5°	122.7	124.2	128.0	133.6	141.0	149.8	160.4	171.8	184.4	199.2	216.7
140°	125.8	127.6	131.1	136.8	143.8	152.7	162.9	173.5	185.5	199.0	214.1
142.5°	129.2	130.7	134.5	139.6	146.7	154.9	164.9	175.2	186.4	198.4	211.9
145°	134.6	135.7	138.9	144.2	150.2	158.3	167.5	177.0	186.9	197.5	208.8
147.5°	140.2	140.8	143.9	148.5	154.3	161.2	169.6	178.2	186.9	196.2	205.9
150°	143.8	144.2	147.0	151.6	156.5	162.9	171.0	178.5	186.9	195.1	203.9
152.5°	147.5	147.6	150.4	154.4	158.8	164.9	171.9	179.0	186.1	193.7	201.6
155°	153.0	153.0	155.1	158.7	162.6	167.5	173.5	179.2	185.2	191.2	198.2
157.5°	157.4	157.7	159.4	162.5	165.8	169.6	174.4	179.5	184.0	189.0	194.4
160°	160.8	160.8	162.2	165.0	167.5	171.0	175.3	179.5	183.4	187.3	191.9
162.5°	163.3	163.3	164.5	166.7	168.9	171.9	175.6	179.2	182.3	185.6	189.3
165°	167.1	166.8	167.5	169.3	170.7	173.2	176.0	178.5	180.6	183.1	185.9
167.5°	170.0	169.6	170.0	171.3	172.3	173.9	175.9	177.9	178.9	180.5	182.6
170°	171.7	171.0	171.4	172.4	173.2	173.9	175.6	177.0	177.8	178.8	180.6
172.5°	172.9	172.4	172.5	173.3	173.7	174.1	175.6	176.8	176.9	177.4	178.6
175°	174.2	173.9	173.5	174.2	174.2	174.6	175.3	176.0	175.6	175.6	176.3
177.5°	174.9	174.6	174.3	174.6	174.6	174.6	174.9	175.4	174.9	174.6	174.9
180°	174.6	174.6	174.6	174.6	174.6	174.6	174.6	174.6	174.6	174.6	174.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1217.8	1217.8	1217.8	1217.8	1217.8	1217.8	1217.8	1217.8
2.5°	1213.1	1215.0	1216.8	1217.7	1217.5	1217.3	1217.1	1216.9
5°	1206.7	1209.0	1211.4	1212.3	1211.8	1211.4	1210.9	1210.4
7.5°	1193.9	1196.0	1198.1	1199.0	1198.7	1198.4	1198.1	1197.9
10°	1182.2	1184.2	1186.3	1187.2	1186.7	1186.2	1185.8	1185.3
12.5°	1169.3	1170.8	1172.4	1173.0	1172.7	1172.4	1172.2	1171.9
15°	1146.1	1147.9	1149.8	1150.0	1148.6	1147.2	1145.9	1144.5
17.5°	1116.7	1118.0	1119.3	1119.7	1119.2	1118.7	1118.2	1117.7
20°	1095.0	1095.9	1096.9	1097.0	1096.3	1095.6	1094.9	1094.2
22.5°	1072.0	1072.8	1073.5	1073.4	1072.6	1071.7	1070.8	1069.9
25°	1033.9	1034.2	1034.4	1034.2	1033.5	1032.8	1032.1	1031.4
27.5°	993.4	993.6	993.8	993.4	992.6	991.7	990.8	989.9
30°	965.4	965.4	965.4	964.6	963.0	961.3	959.7	958.1
32.5°	936.0	934.7	933.4	932.3	931.4	930.5	929.6	928.8
35°	888.3	886.9	885.5	884.2	883.0	881.9	880.7	879.5
37.5°	838.9	837.2	835.6	834.4	833.6	832.9	832.1	831.4
40°	806.7	804.9	803.0	801.6	800.7	799.7	798.8	797.9
42.5°	773.2	771.3	769.5	768.1	767.2	766.2	765.3	764.4
45°	723.2	720.4	717.6	715.6	714.5	713.3	712.1	711.0
47.5°	670.5	667.8	665.0	663.1	662.1	661.1	660.1	659.0
50°	635.7	633.1	630.6	628.6	627.2	625.8	624.4	623.0
52.5°	600.4	598.2	596.0	594.3	592.9	591.5	590.1	588.7
55°	546.7	544.1	541.6	539.7	538.5	537.4	536.2	535.1
57.5°	493.8	491.6	489.3	487.5	486.1	484.8	483.4	482.1
60°	456.5	454.4	452.3	450.7	449.5	448.4	447.2	446.1
62.5°	420.5	418.4	416.3	414.9	414.1	413.3	412.5	411.7
65°	366.9	365.1	363.2	361.9	361.2	360.5	359.8	359.1
67.5°	313.8	312.2	310.5	309.2	308.3	307.3	306.3	305.3
70°	279.5	277.8	276.2	274.8	273.6	272.5	271.3	270.1
72.5°	244.6	243.2	241.8	240.7	240.1	239.5	238.9	238.3
75°	194.5	193.4	192.2	191.3	190.6	189.9	189.2	188.5
77.5°	147.7	146.9	146.1	145.8	145.8	145.8	145.8	145.8
80°	117.9	117.6	117.4	117.3	117.3	117.3	117.3	117.3
82.5°	90.7	90.3	89.8	89.5	89.4	89.2	89.0	88.8
85°	51.4	51.0	50.5	50.3	50.3	50.3	50.3	50.3
87.5°	19.8	19.7	19.6	19.6	19.6	19.6	19.7	19.6
90°	8.8	9.2	9.5	10.2	9.9	10.2	10.6	10.2
92.5°	29.8	23.6	20.8	19.0	18.4	17.3	17.7	17.0
95°	127.2	86.2	67.5	54.8	48.1	44.9	42.4	41.0
97.5°	317.1	254.0	208.4	166.2	140.1	124.2	114.6	111.6
100°	416.6	388.0	346.7	296.5	260.8	235.0	221.2	221.6
102.5°	449.7	448.8	424.7	392.9	365.1	344.7	333.2	325.0
105°	459.4	494.7	501.4	492.3	476.0	462.6	451.3	449.5
107.5°	431.5	488.9	519.9	532.5	532.8	528.2	524.4	521.2
110°	405.0	470.0	514.5	539.3	549.2	552.0	551.3	550.6



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CATALOG NUMBER: S123DIP-S775D365U835-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	378.7	445.1	495.0	526.8	544.9	553.7	556.4	556.5
115°	343.8	405.3	457.3	495.8	522.3	537.8	544.9	546.7
117.5°	318.6	371.7	418.3	457.4	485.1	502.9	513.0	515.4
120°	305.3	353.0	395.4	431.1	459.0	478.8	487.3	489.4
122.5°	294.9	338.0	377.3	410.5	435.3	453.1	462.4	465.1
125°	280.9	319.5	353.4	381.7	404.3	419.8	428.7	431.1
127.5°	268.8	303.1	333.7	359.5	379.6	392.9	400.9	403.1
130°	261.1	293.0	321.6	345.6	364.3	377.1	384.5	387.3
132.5°	254.1	283.3	310.0	332.9	350.5	363.2	369.8	371.8
135°	244.5	269.6	292.6	312.7	330.1	340.7	347.0	349.5
137.5°	235.8	256.4	276.2	293.7	308.2	319.0	324.3	326.0
140°	230.8	248.8	265.7	280.9	294.4	304.3	309.9	309.6
142.5°	226.0	241.4	256.1	269.3	280.8	289.6	294.6	294.3
145°	220.2	231.8	243.1	253.4	262.2	269.6	272.5	273.2
147.5°	215.4	224.7	233.8	241.1	247.8	252.8	255.5	255.8
150°	212.0	220.2	227.6	234.3	239.6	243.5	245.6	245.6
152.5°	208.9	215.9	222.5	228.1	232.2	235.8	237.1	237.1
155°	204.3	209.9	215.2	219.4	222.6	225.5	226.2	226.5
157.5°	199.3	204.0	208.1	211.5	214.2	216.3	216.9	216.8
160°	196.5	200.4	203.9	206.4	208.8	211.0	211.0	210.6
162.5°	193.1	196.4	199.7	201.9	203.5	205.3	205.3	205.0
165°	188.7	190.8	193.3	195.1	196.5	197.9	197.5	197.5
167.5°	184.9	186.5	187.9	189.2	189.8	190.8	190.5	190.5
170°	182.3	183.4	184.8	185.5	185.9	186.6	186.2	186.2
172.5°	180.1	180.9	182.0	182.4	182.5	183.2	182.6	182.3
175°	177.0	177.4	178.1	178.1	178.1	178.5	178.1	177.8
177.5°	175.1	175.4	175.7	175.7	175.4	175.7	175.1	175.1
180°	174.6	174.6	174.6	174.6	174.6	174.6	174.6	174.6

(END OF REPORT)