

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: P332323-935

Luminaire Tested: **S123RDIP-S775D1025U935-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332323-935
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: S123RDIP-S775D1025U935-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1025 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5708.7 lumens
Efficiency: N/A
Efficacy: 109.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

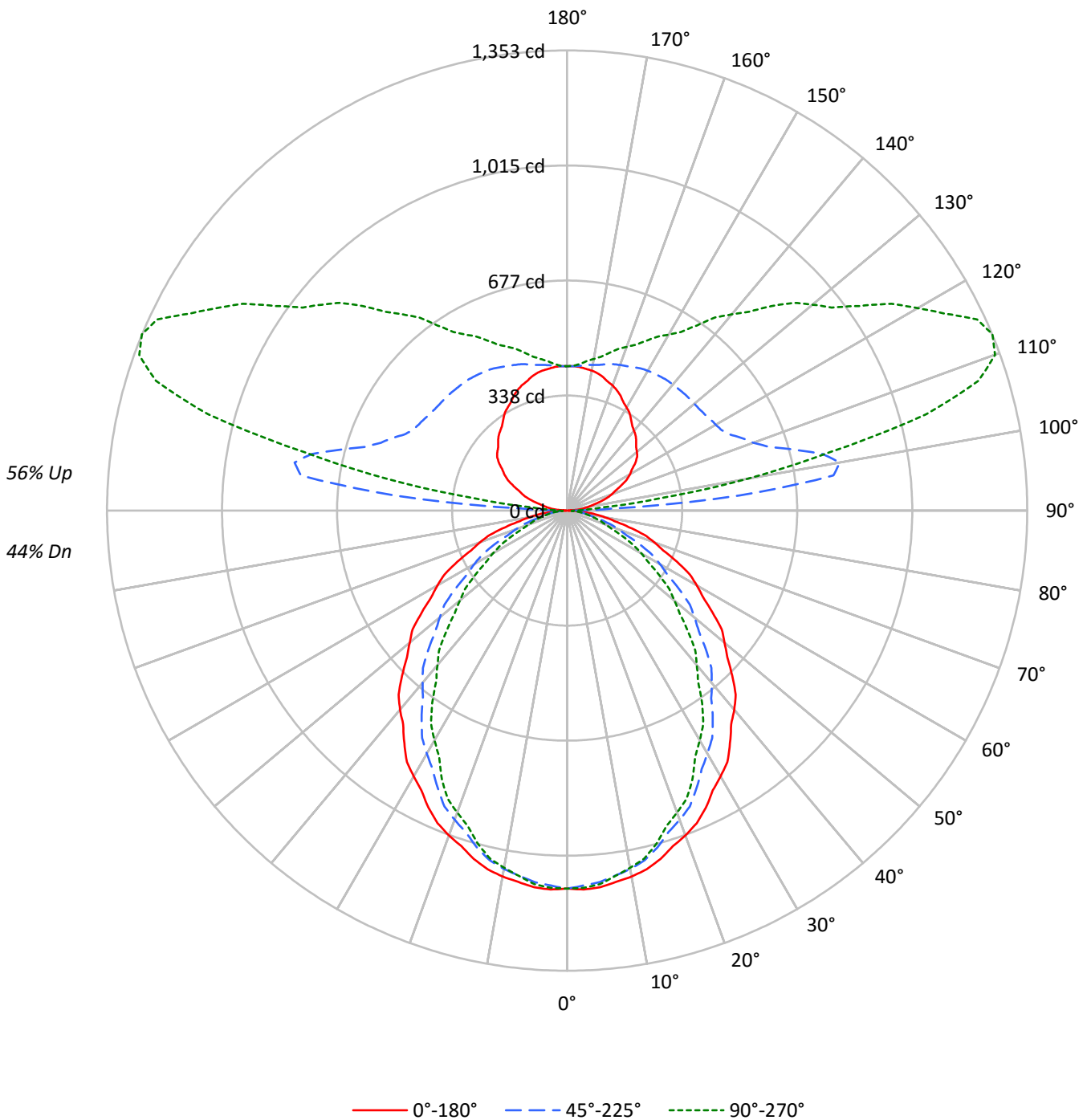
Input Watts (W): 52
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51	44
1	97	93	89	85	88	85	82	79	71	68	66	57	56	54	45	44	43	38
2	88	81	75	70	81	75	69	65	62	58	55	51	48	46	40	38	37	32
3	81	72	64	59	74	66	60	55	55	50	47	45	42	39	36	34	32	27
4	74	63	56	50	67	58	52	47	49	44	40	40	37	34	32	30	28	24
5	68	57	49	43	62	52	45	40	44	39	35	36	32	29	29	26	24	21
6	63	51	43	37	57	47	40	35	40	34	30	33	29	26	26	24	21	18
7	58	46	38	33	53	42	36	31	36	31	27	30	26	23	24	21	19	16
8	54	42	34	29	49	39	32	27	33	28	24	27	23	20	22	19	17	15
9	50	38	31	26	46	35	29	24	30	25	21	25	21	18	21	18	16	13
10	47	35	28	23	43	32	26	22	28	23	19	23	19	17	19	16	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11965	11965	11965
5°	12011	11846	11914
10°	11943	11696	11657
15°	11814	11422	11303
20°	11639	11080	10822
25°	11457	10696	10354
30°	11216	10253	9692
35°	10970	9809	9087
40°	10742	9285	8335
45°	10443	8770	7658
50°	10114	8182	6899
55°	9779	7512	6191
60°	9472	6794	5414
65°	9070	6016	4638
70°	8567	5051	3745
75°	7835	3976	3523
80°	6986	3521	3242
85°	5903	3112	2890



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.4	1.8
10°-20°	290.4	5.1
20°-30°	418.2	7.3
30°-40°	471.1	8.3
40°-50°	450.7	7.9
50°-60°	369.0	6.5
60°-70°	249.0	4.4
70°-80°	125.3	2.2
80°-90°	36.4	0.6
90°-100°	236.3	4.1
100°-110°	669.0	11.7
110°-120°	658.1	11.5
120°-130°	525.0	9.2
130°-140°	413.9	7.3
140°-150°	308.9	5.4
150°-160°	215.3	3.8
160°-170°	126.5	2.2
170°-180°	41.2	0.7
0°-30°	813.0	14.2
0°-40°	1284.1	22.5
0°-60°	2103.8	36.9
0°-90°	2514.5	44.0
90°-120°	1563.5	27.4
90°-150°	2811.2	49.2
90°-180°	3194.0	56.0
0°-180°	5708.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1112	1112	1112	1112	1112	
5°	1112	1107	1096	1104	1103	105
15°	1060	1049	1025	1020	1014	299
25°	965	941	901	882	872	443
35°	835	801	746	709	692	522
45°	686	644	576	526	503	529
55°	521	475	400	350	330	467
65°	356	305	236	194	182	352
75°	188	145	96	87	85	201
85°	48	29	25	24	23	54
90°	2	10	22	24	25	4
95°	29	95	510	149	100	32
105°	100	147	691	1208	1093	106
115°	176	220	529	1159	1330	174
125°	245	289	493	894	1048	217
135°	287	342	486	736	850	222
145°	327	375	480	604	664	205
155°	372	401	465	529	551	171
165°	406	418	445	472	480	115
175°	424	424	427	433	432	40
180°	425	425	425	425	425	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6
2.5°	1115.2	1114.6	1113.9	1113.3	1112.7	1111.4	1109.4	1107.5	1105.6	1103.6	1105.4
5°	1111.6	1110.6	1109.6	1108.6	1107.6	1105.9	1103.5	1101.0	1098.6	1096.3	1098.0
7.5°	1101.3	1100.3	1099.2	1098.0	1097.0	1094.8	1091.7	1088.6	1085.5	1082.4	1083.4
10°	1092.7	1091.2	1089.9	1088.5	1087.0	1084.5	1080.9	1077.4	1073.8	1070.1	1070.3
12.5°	1080.4	1078.8	1077.3	1075.7	1074.2	1071.2	1066.8	1062.4	1057.9	1053.5	1053.4
15°	1060.2	1058.0	1055.8	1053.6	1051.4	1047.5	1041.9	1036.3	1030.6	1025.0	1024.1
17.5°	1034.7	1032.3	1029.7	1027.1	1024.5	1019.7	1012.5	1005.4	998.2	991.2	989.0
20°	1016.1	1012.8	1009.6	1006.4	1003.2	997.8	990.2	982.6	975.0	967.3	964.8
22.5°	995.1	991.4	987.7	984.0	980.3	974.5	966.4	958.3	950.2	942.1	938.8
25°	964.7	959.7	954.6	949.6	944.6	937.5	928.2	919.0	909.8	900.6	896.4
27.5°	927.6	922.1	916.6	911.1	905.6	897.7	887.4	877.2	866.9	856.6	850.8
30°	902.4	896.4	890.4	884.4	878.4	869.8	858.6	847.3	836.1	824.9	818.1
32.5°	877.2	870.4	863.6	856.8	850.0	840.6	828.7	816.9	805.0	793.2	785.7
35°	834.8	827.6	820.4	813.2	806.0	796.2	783.8	771.3	758.9	746.5	737.9
37.5°	791.9	783.9	775.8	767.8	759.8	749.2	736.0	722.7	709.5	696.2	686.4
40°	764.5	755.7	746.8	738.0	729.3	717.7	703.5	689.3	675.0	660.8	650.4
42.5°	733.5	724.7	715.8	707.1	698.3	686.5	671.8	657.0	642.4	627.7	616.3
45°	686.0	677.1	668.0	659.0	650.0	637.8	622.3	606.9	591.5	576.1	564.6
47.5°	638.7	628.8	618.9	609.0	599.1	586.4	571.0	555.5	540.1	524.7	512.3
50°	604.0	594.6	585.2	575.8	566.4	553.5	537.4	521.1	504.9	488.6	476.2
52.5°	573.0	562.8	552.6	542.3	532.2	519.0	502.9	486.9	470.8	454.7	441.9
55°	521.1	511.3	501.4	491.6	481.8	468.4	451.3	434.4	417.3	400.3	388.7
57.5°	473.1	462.4	451.8	441.0	430.3	416.5	399.3	382.2	365.1	348.0	337.0
60°	440.0	429.0	417.9	406.9	395.9	382.0	365.4	348.8	332.2	315.6	304.7
62.5°	406.7	395.7	384.7	373.7	362.7	348.9	332.3	315.6	299.0	282.3	272.2
65°	356.1	345.1	334.1	323.0	312.0	298.7	283.1	267.4	251.8	236.2	226.4
67.5°	305.5	294.3	283.2	272.0	260.9	247.8	232.8	217.8	202.9	187.9	180.6
70°	272.2	261.5	250.6	239.8	229.0	216.5	202.5	188.6	174.5	160.5	153.4
72.5°	239.1	228.4	217.7	207.1	196.5	184.8	172.0	159.3	146.5	133.8	128.0
75°	188.4	178.8	169.2	159.5	150.0	139.7	128.6	117.6	106.6	95.6	93.6
77.5°	142.2	133.5	124.8	116.1	107.5	99.6	92.5	85.4	78.4	71.2	70.2
80°	112.7	104.4	96.3	88.1	79.8	73.6	69.4	65.2	61.0	56.8	56.2
82.5°	84.6	77.5	70.3	63.3	56.2	51.7	49.7	47.7	45.8	43.8	43.2
85°	47.8	43.4	39.0	34.5	30.1	27.6	27.0	26.4	25.8	25.2	24.9
87.5°	17.7	16.3	14.8	13.6	12.1	11.6	12.1	12.7	13.2	13.7	13.3
90°	1.7	3.4	5.2	7.7	9.5	11.2	13.8	16.4	18.9	21.5	20.7
92.5°	10.7	15.8	23.1	29.7	36.9	49.7	72.2	109.2	145.4	132.2	99.7
95°	29.2	31.8	41.2	55.9	78.2	111.8	184.8	312.8	453.7	509.6	413.4
97.5°	49.9	50.7	58.1	70.8	92.8	129.1	198.9	343.3	578.2	789.8	845.0
100°	63.6	64.5	70.5	82.5	103.1	136.6	196.8	324.0	550.0	813.9	983.2
102.5°	78.0	79.6	84.9	96.3	114.9	145.6	199.6	307.5	508.8	769.2	990.1
105°	99.7	102.3	107.5	117.8	134.1	160.7	207.2	295.7	458.1	691.0	937.6
107.5°	122.7	125.3	130.3	140.4	155.8	180.5	221.2	294.8	425.8	621.9	845.8
110°	139.2	141.8	146.1	155.6	170.1	194.2	232.9	298.3	413.4	582.7	788.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	154.4	157.0	161.3	170.7	185.3	208.7	244.6	305.1	406.5	556.6	737.9
115°	176.2	179.6	184.8	193.4	208.0	231.2	263.8	316.2	403.9	528.6	677.3
117.5°	198.0	202.0	206.3	214.1	230.5	252.0	284.3	331.1	405.4	512.0	640.6
120°	213.1	215.7	220.0	228.6	245.0	266.4	297.4	342.1	408.2	504.5	621.4
122.5°	226.2	228.8	233.1	242.4	258.0	280.9	311.1	352.4	413.0	499.6	605.5
125°	245.0	246.7	251.8	261.2	277.6	300.8	330.9	368.7	420.3	493.4	585.3
127.5°	259.2	261.7	268.1	277.8	295.8	319.0	348.1	382.1	428.5	490.3	567.4
130°	268.1	270.7	278.4	288.8	306.8	330.0	358.3	391.1	434.0	488.2	557.8
132.5°	275.0	278.3	286.7	299.1	317.1	339.7	367.3	399.3	438.2	487.5	548.8
135°	287.1	290.5	300.0	312.8	330.9	354.0	380.7	409.9	444.4	486.5	537.2
137.5°	298.4	302.0	311.3	325.0	342.9	364.4	390.0	417.8	448.4	484.6	527.0
140°	306.0	310.2	318.8	332.6	349.8	371.3	396.2	422.0	451.2	483.9	520.8
142.5°	314.2	317.8	327.1	339.5	356.6	376.8	401.1	426.1	453.2	482.5	515.3
145°	327.4	330.0	337.8	350.7	365.2	385.0	407.3	430.6	454.6	480.4	507.9
147.5°	340.9	342.4	350.0	361.1	375.2	392.1	412.5	433.3	454.6	477.2	500.7
150°	349.8	350.7	357.5	368.7	380.7	396.2	415.9	434.0	454.6	474.4	495.8
152.5°	358.7	358.9	365.8	375.6	386.2	401.1	418.0	435.4	452.5	471.0	490.4
155°	372.1	372.1	377.3	385.9	395.4	407.3	422.0	435.8	450.3	464.9	482.2
157.5°	382.8	383.5	387.6	395.2	403.2	412.5	424.2	436.6	447.5	459.6	472.9
160°	391.1	391.1	394.5	401.3	407.3	415.9	426.3	436.6	446.1	455.5	466.7
162.5°	397.3	397.3	400.0	405.4	410.8	418.0	427.0	435.9	443.3	451.3	460.5
165°	406.5	405.6	407.3	411.6	415.1	421.1	428.0	434.0	439.2	445.2	452.0
167.5°	413.5	412.5	413.4	416.6	419.0	422.8	427.8	432.7	435.1	439.0	444.0
170°	417.7	415.9	416.8	419.4	421.1	422.8	427.1	430.6	432.3	434.9	439.2
172.5°	420.4	419.4	419.6	421.5	422.5	423.5	427.1	429.9	430.2	431.4	434.4
175°	423.7	422.8	422.0	423.7	423.7	424.6	426.3	428.0	427.1	427.1	428.9
177.5°	425.2	424.6	423.9	424.6	424.6	424.6	425.2	426.6	425.2	424.6	425.2
180°	424.6	424.6	424.6	424.6	424.6	424.6	424.6	424.6	424.6	424.6	424.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6
2.5°	1107.2	1109.0	1110.7	1111.5	1111.1	1110.8	1110.4	1110.2
5°	1099.8	1101.6	1103.5	1104.1	1103.8	1103.4	1102.9	1102.6
7.5°	1084.4	1085.4	1086.4	1086.6	1085.9	1085.2	1084.5	1083.8
10°	1070.6	1070.7	1070.9	1070.6	1069.5	1068.5	1067.6	1066.5
12.5°	1053.3	1053.2	1053.1	1052.4	1051.3	1050.1	1049.0	1047.8
15°	1023.0	1022.0	1021.1	1019.9	1018.5	1017.0	1015.6	1014.3
17.5°	986.9	984.8	982.7	980.6	978.4	976.4	974.3	972.2
20°	962.2	959.5	956.9	954.4	952.0	949.6	947.2	944.8
22.5°	935.6	932.4	929.1	926.3	924.1	921.9	919.6	917.4
25°	892.3	888.0	883.8	880.6	878.4	876.2	874.0	871.8
27.5°	844.9	839.1	833.3	828.6	825.3	821.9	818.6	815.2
30°	811.3	804.4	797.6	792.6	789.5	786.3	783.0	779.8
32.5°	778.3	770.9	763.4	757.9	754.6	751.2	747.9	744.5
35°	729.3	720.7	712.0	705.9	702.3	698.7	695.1	691.5
37.5°	676.6	666.8	657.0	650.0	645.5	641.0	636.6	632.1
40°	640.0	629.6	619.1	611.7	607.0	602.4	597.8	593.2
42.5°	604.9	593.5	582.1	574.4	570.2	566.1	562.0	557.8
45°	553.3	541.8	530.4	522.3	517.5	512.6	507.9	503.1
47.5°	499.8	487.4	475.0	466.7	462.4	458.1	453.8	449.5
50°	463.8	451.3	438.9	430.4	425.9	421.2	416.6	412.0
52.5°	429.0	416.0	403.1	394.6	390.5	386.3	382.2	378.1
55°	377.0	365.4	353.8	345.9	342.0	337.9	334.0	329.9
57.5°	326.1	315.0	304.1	296.9	293.5	290.1	286.6	283.3
60°	293.9	283.1	272.2	265.2	261.7	258.3	254.9	251.5
62.5°	262.0	251.8	241.7	234.8	231.2	227.6	224.1	220.5
65°	216.5	206.7	196.9	190.9	188.7	186.5	184.3	182.1
67.5°	173.2	165.9	158.5	153.7	151.4	149.0	146.6	144.2
70°	146.5	139.4	132.4	127.9	125.6	123.4	121.2	119.0
72.5°	122.3	116.6	110.9	107.5	106.6	105.7	104.8	103.8
75°	91.5	89.5	87.6	86.4	85.9	85.6	85.2	84.7
77.5°	69.1	67.9	66.9	66.1	65.8	65.3	64.9	64.6
80°	55.6	55.0	54.4	53.9	53.5	53.1	52.7	52.3
82.5°	42.6	42.0	41.4	41.1	41.0	40.9	40.8	40.7
85°	24.5	24.0	23.7	23.4	23.4	23.4	23.4	23.4
87.5°	13.3	13.3	13.3	13.5	13.3	13.3	13.3	12.9
90°	21.5	22.4	23.2	24.9	24.0	24.9	25.7	24.9
92.5°	72.3	57.4	50.7	46.2	44.7	42.1	43.0	41.4
95°	309.4	209.7	164.2	133.2	116.9	109.2	103.1	99.7
97.5°	771.3	617.8	506.9	404.1	340.7	302.0	278.8	271.4
100°	1013.3	943.7	843.1	721.1	634.3	571.5	538.0	538.9
102.5°	1093.7	1091.5	1032.9	955.5	887.9	838.3	810.3	790.5
105°	1117.2	1203.2	1219.5	1197.2	1157.6	1125.0	1097.5	1093.2
107.5°	1049.6	1189.1	1264.4	1295.0	1295.7	1284.7	1275.4	1267.5
110°	984.9	1143.1	1251.3	1311.5	1335.6	1342.5	1340.7	1339.0



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CATALOG NUMBER: S123RDIP-S775D1025U935-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	920.9	1082.5	1203.9	1281.3	1325.3	1346.5	1353.1	1353.4
115°	836.2	985.8	1112.1	1205.7	1270.2	1308.0	1325.3	1329.6
117.5°	774.9	904.0	1017.4	1112.4	1179.7	1223.0	1247.8	1253.5
120°	742.5	858.6	961.7	1048.5	1116.4	1164.5	1185.2	1190.3
122.5°	717.1	822.2	917.7	998.3	1058.7	1102.0	1124.6	1131.2
125°	683.3	777.0	859.5	928.2	983.2	1021.0	1042.5	1048.5
127.5°	653.7	737.2	811.7	874.2	923.2	955.5	974.9	980.4
130°	635.2	712.5	782.0	840.5	886.1	917.1	935.0	941.9
132.5°	617.9	689.1	753.9	809.6	852.4	883.3	899.3	904.1
135°	594.7	655.7	711.6	760.6	802.7	828.5	844.0	850.0
137.5°	573.6	623.6	671.8	714.2	749.6	775.8	788.8	792.7
140°	561.2	605.0	646.3	683.3	715.9	739.9	753.7	752.9
142.5°	549.5	587.2	622.9	655.0	682.9	704.2	716.6	715.7
145°	535.5	563.8	591.2	616.2	637.7	655.7	662.6	664.3
147.5°	523.9	546.4	568.6	586.3	602.6	614.8	621.4	622.1
150°	515.7	535.5	553.5	569.8	582.7	592.1	597.3	597.3
152.5°	508.1	525.1	541.1	554.7	564.8	573.6	576.7	576.7
155°	496.7	510.5	523.4	533.7	541.5	548.3	550.0	550.9
157.5°	484.7	496.2	506.2	514.3	521.0	526.2	527.5	527.4
160°	477.9	487.3	495.8	501.9	507.9	513.1	513.1	512.2
162.5°	469.6	477.7	485.6	490.9	494.9	499.3	499.3	498.4
165°	458.9	464.1	470.1	474.4	477.9	481.3	480.4	480.4
167.5°	449.6	453.6	457.0	460.1	461.7	464.1	463.2	463.2
170°	443.5	446.1	449.4	451.2	452.0	453.7	452.9	452.9
172.5°	438.0	439.9	442.6	443.7	443.8	445.6	444.0	443.3
175°	430.6	431.4	433.2	433.2	433.2	434.0	433.2	432.3
177.5°	425.9	426.6	427.3	427.3	426.6	427.3	425.9	425.9
180°	424.6	424.6	424.6	424.6	424.6	424.6	424.6	424.6

(END OF REPORT)