

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: P331565-935

Luminaire Tested: **S122DIW-S865D710U935-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331565-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S865D710U935-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 710 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5466.1 lumens
Efficiency: N/A
Efficacy: 102.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

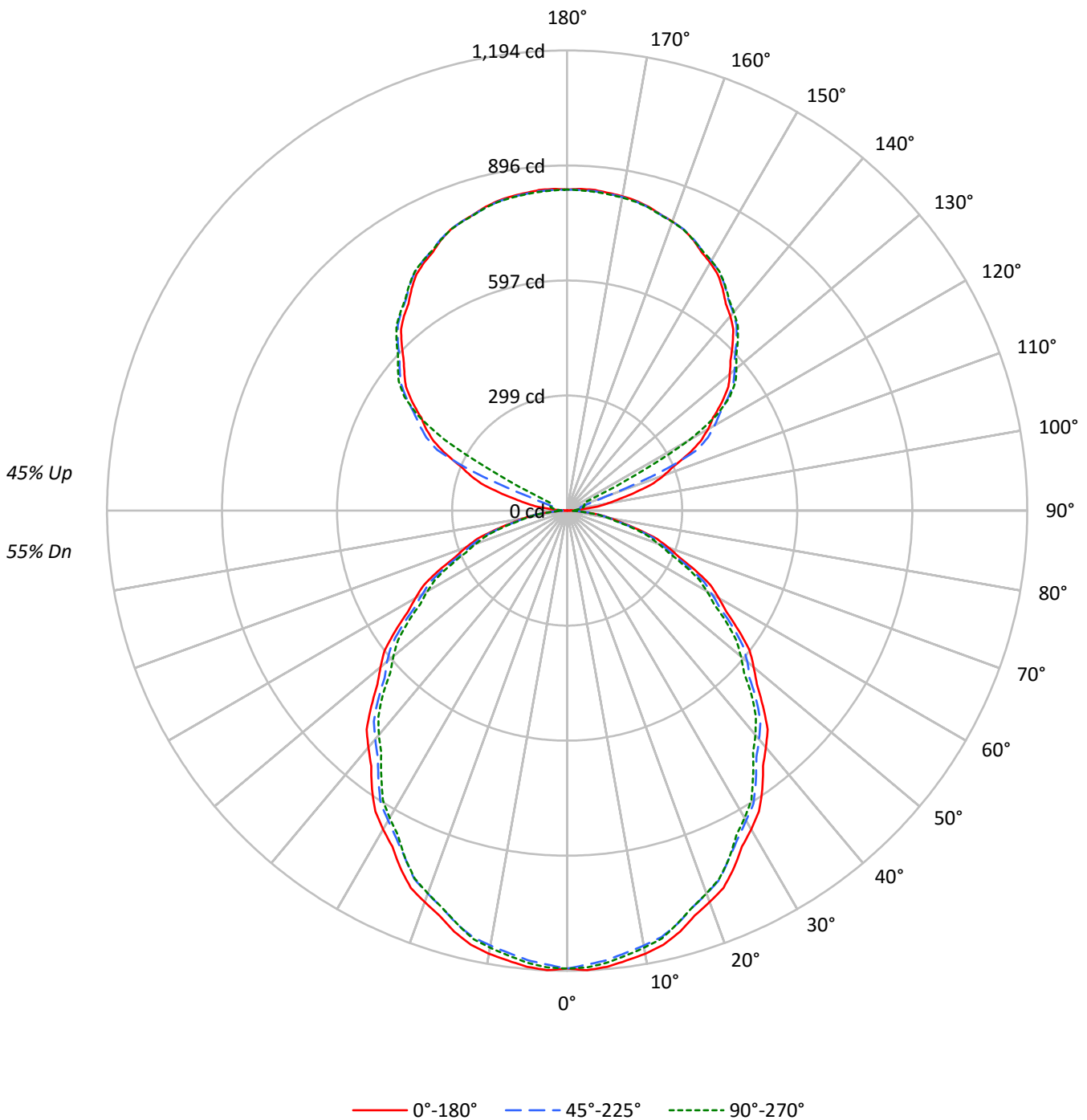
Input Watts (W): 53.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	108	108	108	108	101	101	101	101	86	86	86	73	73	73	61	61	61
1	99	95	91	87	92	88	85	82	76	73	71	64	63	61	54	53	52
2	90	83	76	71	83	77	72	67	66	62	59	57	54	51	47	45	43
3	82	73	65	59	76	68	61	56	59	54	49	50	46	43	42	39	37
4	75	64	56	50	70	60	53	47	52	47	42	45	40	37	38	34	32
5	69	57	49	43	64	54	46	41	47	41	36	40	36	32	34	31	28
6	64	51	43	37	59	48	41	36	42	36	32	36	32	28	31	27	24
7	59	47	38	33	55	44	36	31	38	32	28	33	28	25	28	25	22
8	55	42	34	29	51	40	33	28	35	29	25	30	26	22	26	22	20
9	51	39	31	26	47	36	29	25	32	26	22	28	23	20	24	20	18
10	48	35	28	23	44	33	27	22	29	24	20	26	21	18	22	19	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	19184	19184	19184
5°	19258	18979	19091
10°	19143	18787	18882
15°	18907	18544	18524
20°	18570	18179	18158
25°	18235	17728	17728
30°	17807	17316	17167
35°	17406	16821	16575
40°	16904	16326	16012
45°	16408	15835	15445
50°	15870	15325	14780
55°	15308	14728	14184
60°	14683	14018	13504
65°	14013	13310	12699
70°	13161	12458	11863
75°	11971	11472	11185
80°	10628	10302	9772
85°	8670	8262	7410



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.7	2.0
10°-20°	314.4	5.8
20°-30°	462.1	8.5
30°-40°	536.8	9.8
40°-50°	536.2	9.8
50°-60°	467.6	8.6
60°-70°	345.7	6.3
70°-80°	195.8	3.6
80°-90°	54.7	1.0
90°-100°	27.8	0.5
100°-110°	101.9	1.9
110°-120°	272.4	5.0
120°-130°	449.6	8.2
130°-140°	478.2	8.7
140°-150°	444.4	8.1
150°-160°	357.3	6.5
160°-170°	230.3	4.2
170°-180°	79.3	1.4
0°-30°	888.2	16.2
0°-40°	1425.0	26.1
0°-60°	2428.7	44.4
0°-90°	3025.0	55.3
90°-120°	402.1	7.4
90°-150°	1774.3	32.5
90°-180°	2441.0	44.7
0°-180°	5466.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1188	1188	1188	1188	1188	
5°	1188	1183	1171	1180	1178	113
15°	1131	1124	1109	1113	1108	318
25°	1024	1014	995	997	995	471
35°	883	871	853	847	841	551
45°	719	710	694	681	676	554
55°	544	537	523	510	504	486
65°	367	360	348	338	332	363
75°	192	189	184	178	179	205
85°	47	46	45	41	40	54
90°	1	7	12	15	16	4
95°	39	21	24	26	26	48
105°	183	191	37	43	46	196
115°	347	357	372	106	49	341
125°	490	498	509	513	515	437
135°	606	616	622	627	626	468
145°	703	703	713	717	714	440
155°	775	770	776	779	775	357
165°	816	813	814	818	814	230
175°	835	831	832	835	830	79
180°	833	833	833	833	833	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2
2.5°	1193.7	1192.7	1191.6	1190.7	1189.6	1188.0	1185.8	1183.5	1181.3	1179.1	1181.1
5°	1188.2	1187.1	1186.2	1185.2	1184.1	1182.2	1179.5	1176.6	1173.9	1171.0	1173.1
7.5°	1177.7	1176.1	1174.6	1172.9	1171.4	1169.2	1166.3	1163.5	1160.6	1157.8	1159.9
10°	1167.6	1165.9	1164.1	1162.3	1160.5	1158.1	1155.0	1152.0	1149.0	1145.9	1148.0
12.5°	1153.9	1152.4	1150.8	1149.2	1147.6	1145.3	1142.3	1139.2	1136.2	1133.2	1134.5
15°	1131.1	1129.5	1128.0	1126.5	1125.0	1122.6	1119.3	1115.9	1112.7	1109.4	1110.3
17.5°	1101.8	1100.3	1098.8	1097.3	1095.7	1093.3	1089.9	1086.6	1083.2	1079.9	1081.1
20°	1080.8	1079.3	1077.8	1076.2	1074.7	1072.2	1068.6	1065.1	1061.5	1058.0	1058.7
22.5°	1059.8	1057.7	1055.5	1053.3	1051.3	1048.5	1045.2	1041.8	1038.5	1035.1	1035.3
25°	1023.6	1021.7	1019.6	1017.6	1015.5	1012.4	1008.1	1003.8	999.4	995.1	995.7
27.5°	982.6	980.8	978.9	977.1	975.3	972.6	969.2	965.8	962.4	959.0	958.3
30°	955.1	953.1	951.1	949.1	947.0	944.1	940.3	936.5	932.6	928.8	928.1
32.5°	925.9	924.3	922.6	921.0	919.4	916.5	912.6	908.5	904.6	900.5	899.1
35°	883.1	880.6	878.0	875.6	873.0	869.7	865.6	861.6	857.5	853.4	852.0
37.5°	834.9	832.7	830.4	828.2	826.0	822.9	818.8	814.8	810.6	806.6	804.7
40°	802.0	800.0	798.0	795.9	793.9	790.8	786.8	782.7	778.7	774.6	772.3
42.5°	770.1	768.0	765.9	764.0	761.9	758.9	754.8	750.8	746.7	742.6	740.1
45°	718.6	716.9	715.1	713.3	711.5	708.7	704.9	701.1	697.3	693.5	690.7
47.5°	667.4	665.8	664.1	662.5	660.7	657.9	653.9	650.0	646.0	642.0	639.1
50°	631.8	630.5	629.3	628.0	626.7	624.3	620.8	617.2	613.6	610.1	606.6
52.5°	597.1	595.4	593.7	592.0	590.4	587.9	584.5	581.2	577.8	574.5	571.5
55°	543.8	542.3	540.8	539.2	537.7	535.5	532.4	529.3	526.3	523.2	520.2
57.5°	490.3	489.1	487.9	486.7	485.5	483.2	479.8	476.5	473.1	469.8	466.8
60°	454.7	453.7	452.7	451.7	450.6	448.4	444.8	441.3	437.7	434.1	431.4
62.5°	420.0	418.4	416.7	415.1	413.5	411.3	408.5	405.8	403.0	400.4	397.8
65°	366.8	365.2	363.7	362.1	360.7	358.6	356.1	353.5	351.0	348.4	346.2
67.5°	312.6	311.3	310.1	308.9	307.7	306.0	303.7	301.4	299.1	296.8	295.1
70°	278.8	277.8	276.7	275.7	274.7	273.0	270.8	268.5	266.2	263.9	262.2
72.5°	244.0	243.1	242.0	241.0	240.0	238.8	237.3	235.8	234.3	232.8	231.1
75°	191.9	191.4	190.9	190.5	189.9	189.0	187.8	186.5	185.2	183.9	182.4
77.5°	145.3	144.5	143.6	142.8	141.9	141.2	140.7	140.2	139.7	139.1	138.4
80°	114.3	114.0	113.7	113.5	113.2	112.9	112.4	111.8	111.3	110.8	110.0
82.5°	85.0	85.0	84.9	84.8	84.8	84.6	84.3	84.0	83.7	83.4	82.4
85°	46.8	46.6	46.3	46.1	45.8	45.5	45.3	45.0	44.8	44.6	43.8
87.5°	16.5	16.4	16.4	16.3	16.1	16.0	15.8	15.6	15.4	15.2	14.7
90°	0.6	2.1	3.5	5.0	6.5	7.7	8.9	9.9	11.0	12.1	12.7
92.5°	12.1	12.1	11.9	11.8	11.6	11.9	12.4	12.9	13.4	13.9	14.3
95°	39.2	34.8	30.3	25.9	21.5	19.7	20.7	21.6	22.6	23.5	24.2
97.5°	77.7	65.3	52.9	40.4	27.9	22.8	25.0	27.1	29.3	31.4	32.0
100°	106.7	88.3	70.0	51.7	33.3	25.2	27.6	29.8	32.1	34.4	35.4
102.5°	138.5	134.7	130.7	126.8	123.0	111.5	92.5	73.4	54.3	35.3	36.7
105°	183.2	187.3	191.3	195.3	199.3	183.0	146.5	109.9	73.4	36.8	38.2
107.5°	234.2	237.5	240.7	243.9	247.2	226.9	183.0	139.2	95.3	51.5	49.9
110°	267.0	269.8	272.7	275.4	278.3	260.3	221.6	182.9	144.2	105.5	92.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	297.9	300.4	302.9	305.3	307.8	304.3	294.7	285.2	275.6	266.0	217.2
115°	346.6	348.9	351.1	353.4	355.7	358.5	361.9	365.2	368.5	371.9	309.9
117.5°	390.1	392.6	395.2	397.7	400.3	402.7	405.0	407.3	409.6	411.9	396.9
120°	421.9	424.0	425.9	427.9	430.0	432.1	434.5	437.0	439.4	441.8	443.4
122.5°	448.9	451.1	453.1	455.3	457.4	459.8	462.4	465.0	467.6	470.3	471.2
125°	490.0	491.8	493.5	495.2	497.0	499.1	501.7	504.2	506.8	509.3	510.2
127.5°	527.3	529.2	531.2	533.0	535.0	536.9	538.8	540.7	542.6	544.5	545.9
130°	550.9	553.0	555.2	557.3	559.5	561.3	562.7	564.2	565.7	567.2	568.7
132.5°	575.1	576.9	578.7	580.5	582.3	583.9	585.4	586.9	588.4	589.9	591.1
135°	606.4	608.5	610.6	612.8	614.9	616.6	617.9	619.1	620.3	621.5	622.8
137.5°	638.1	639.6	641.1	642.6	644.0	645.5	646.9	648.2	649.6	651.0	652.3
140°	658.8	659.9	660.9	662.0	663.1	664.3	665.8	667.3	668.7	670.3	671.5
142.5°	676.1	677.1	678.1	679.1	680.0	681.3	683.0	684.8	686.4	688.1	689.2
145°	703.4	703.3	703.2	703.0	702.8	704.0	706.2	708.5	710.8	713.1	714.0
147.5°	727.1	726.7	726.2	725.7	725.1	726.0	728.2	730.5	732.7	734.9	735.7
150°	742.6	741.7	740.7	739.8	738.8	739.4	741.6	743.7	745.9	748.0	748.8
152.5°	755.6	754.6	753.5	752.4	751.4	751.9	754.0	756.0	758.0	760.1	760.9
155°	774.6	773.4	772.1	770.9	769.7	769.9	771.5	773.1	774.7	776.4	777.1
157.5°	789.4	788.3	787.3	786.3	785.3	785.3	786.4	787.6	788.7	789.8	790.7
160°	798.1	797.2	796.4	795.7	794.8	794.8	795.7	796.4	797.2	798.1	798.8
162.5°	805.7	804.9	804.2	803.3	802.5	802.5	803.1	803.9	804.6	805.3	806.2
165°	816.1	815.3	814.5	813.7	812.9	812.7	813.1	813.5	813.9	814.3	815.3
167.5°	823.8	823.0	822.3	821.4	820.6	820.4	820.8	821.1	821.6	821.9	822.9
170°	828.2	827.3	826.6	825.8	824.9	824.7	824.9	825.3	825.5	825.8	826.7
172.5°	831.0	830.3	829.5	828.6	827.9	827.6	827.9	828.1	828.4	828.6	829.6
175°	834.8	833.9	832.9	832.0	831.0	830.7	831.0	831.3	831.6	831.8	832.8
177.5°	835.4	834.7	833.9	833.2	832.4	832.1	832.2	832.3	832.4	832.5	833.3
180°	833.0	833.0	833.0	833.0	833.0	833.0	833.0	833.0	833.0	833.0	833.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2
2.5°	1183.1	1185.2	1187.1	1188.0	1187.6	1187.1	1186.8	1186.4
5°	1175.1	1177.2	1179.2	1179.9	1179.5	1179.0	1178.5	1177.9
7.5°	1161.8	1163.9	1166.0	1166.7	1166.1	1165.5	1165.0	1164.4
10°	1150.0	1152.0	1154.1	1154.7	1153.9	1153.1	1152.4	1151.7
12.5°	1136.0	1137.4	1138.8	1139.3	1138.7	1138.2	1137.6	1137.0
15°	1111.4	1112.4	1113.4	1113.3	1112.1	1110.8	1109.5	1108.2
17.5°	1082.2	1083.4	1084.6	1084.5	1083.3	1082.1	1080.9	1079.7
20°	1059.5	1060.2	1061.0	1060.8	1059.9	1058.9	1057.8	1056.8
22.5°	1035.4	1035.5	1035.7	1035.5	1034.8	1034.2	1033.6	1033.0
25°	996.2	996.6	997.1	997.1	996.6	996.2	995.7	995.1
27.5°	957.5	956.7	956.0	955.0	953.7	952.5	951.3	950.1
30°	927.3	926.6	925.8	924.9	923.9	922.9	921.9	920.8
32.5°	897.8	896.4	895.0	893.8	892.9	891.8	890.8	889.8
35°	850.4	848.9	847.4	845.9	844.7	843.4	842.1	840.9
37.5°	802.9	801.0	799.1	797.5	796.3	795.1	793.9	792.6
40°	770.1	767.8	765.5	763.8	762.8	761.8	760.8	759.7
42.5°	737.6	735.1	732.7	730.7	729.3	727.9	726.4	725.0
45°	687.9	685.1	682.3	680.4	679.4	678.4	677.3	676.4
47.5°	636.2	633.3	630.3	628.1	626.6	625.2	623.7	622.2
50°	603.0	599.4	595.9	593.5	592.2	590.9	589.7	588.4
52.5°	568.5	565.6	562.7	560.3	558.7	557.0	555.3	553.6
55°	517.2	514.1	511.1	508.9	507.6	506.4	505.1	503.9
57.5°	463.8	460.8	457.8	455.8	454.9	453.9	453.0	451.9
60°	428.6	425.8	423.0	421.2	420.4	419.7	418.9	418.2
62.5°	395.1	392.5	389.9	388.2	387.2	386.2	385.3	384.4
65°	343.9	341.6	339.3	337.5	336.3	335.0	333.7	332.4
67.5°	293.3	291.4	289.7	288.3	287.3	286.3	285.2	284.2
70°	260.4	258.6	256.8	255.4	254.4	253.4	252.4	251.3
72.5°	229.3	227.5	225.8	224.5	223.6	222.8	222.0	221.2
75°	180.9	179.3	177.9	177.4	177.9	178.4	178.8	179.3
77.5°	137.7	136.9	136.1	135.3	134.7	134.0	133.3	132.5
80°	109.3	108.6	107.8	107.1	106.6	106.2	105.6	105.1
82.5°	81.5	80.5	79.6	79.0	78.9	78.8	78.7	78.6
85°	43.0	42.3	41.5	41.0	40.7	40.5	40.2	40.0
87.5°	14.3	13.8	13.3	13.0	12.8	12.7	12.6	12.4
90°	13.4	14.0	14.7	15.2	15.5	15.8	16.0	16.3
92.5°	14.7	15.1	15.4	15.7	15.8	15.9	16.1	16.3
95°	24.9	25.5	26.2	26.4	26.3	26.2	26.1	25.9
97.5°	32.5	33.1	33.6	33.9	34.1	34.3	34.4	34.6
100°	36.5	37.5	38.7	39.3	39.6	39.9	40.1	40.4
102.5°	38.1	39.5	40.9	41.8	42.2	42.5	42.9	43.3
105°	39.7	41.2	42.6	43.7	44.2	44.8	45.3	45.8
107.5°	48.5	47.0	45.5	45.0	45.5	46.1	46.6	47.1
110°	78.7	65.3	51.9	45.5	46.0	46.6	47.1	47.6



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CATALOG NUMBER: S122DIW-S865D710U935-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	168.3	119.5	70.6	46.4	46.8	47.3	47.7	48.1
115°	247.9	185.8	123.8	88.0	78.4	68.7	59.1	49.4
117.5°	381.9	366.9	351.9	328.6	296.9	265.2	233.5	201.8
120°	445.1	446.6	448.2	440.0	421.9	403.8	385.7	367.6
122.5°	472.2	473.1	474.2	472.9	469.3	465.8	462.4	458.8
125°	511.2	512.1	513.1	513.8	514.1	514.5	515.0	515.3
127.5°	547.3	548.6	550.0	550.7	550.8	550.9	551.0	551.0
130°	570.2	571.6	573.1	573.8	573.6	573.5	573.3	573.3
132.5°	592.4	593.7	594.9	595.5	595.3	595.2	595.0	595.0
135°	624.1	625.4	626.8	627.3	627.1	626.8	626.5	626.3
137.5°	653.6	654.9	656.3	656.7	656.2	655.7	655.3	654.8
140°	672.7	673.9	675.1	675.4	674.7	674.0	673.3	672.7
142.5°	690.3	691.4	692.5	692.7	692.1	691.4	690.7	690.0
145°	714.9	715.8	716.8	717.0	716.3	715.6	714.9	714.3
147.5°	736.4	737.1	737.8	737.9	737.3	736.8	736.2	735.6
150°	749.6	750.4	751.2	751.3	750.6	749.9	749.2	748.6
152.5°	761.6	762.5	763.3	763.3	762.3	761.5	760.6	759.7
155°	777.9	778.8	779.5	779.4	778.3	777.3	776.2	775.2
157.5°	791.7	792.6	793.5	793.4	792.4	791.3	790.3	789.2
160°	799.6	800.5	801.2	801.2	800.2	799.3	798.4	797.5
162.5°	807.1	808.0	808.9	808.8	807.6	806.5	805.3	804.2
165°	816.2	817.1	818.0	818.0	817.1	816.2	815.3	814.3
167.5°	823.8	824.8	825.6	825.5	824.3	823.1	821.9	820.7
170°	827.7	828.5	829.5	829.4	828.2	827.0	825.8	824.6
172.5°	830.5	831.5	832.4	832.2	831.0	829.8	828.6	827.4
175°	833.7	834.6	835.5	835.3	834.0	832.7	831.3	830.0
177.5°	834.1	834.7	835.5	835.4	834.5	833.4	832.5	831.6
180°	833.0	833.0	833.0	833.0	833.0	833.0	833.0	833.0

(END OF REPORT)