

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: P331552

Luminaire Tested: **S122DIW-S675D1440U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331552
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S675D1440U835-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1440 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7689.7 lumens
Efficiency: N/A
Efficacy: 112.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

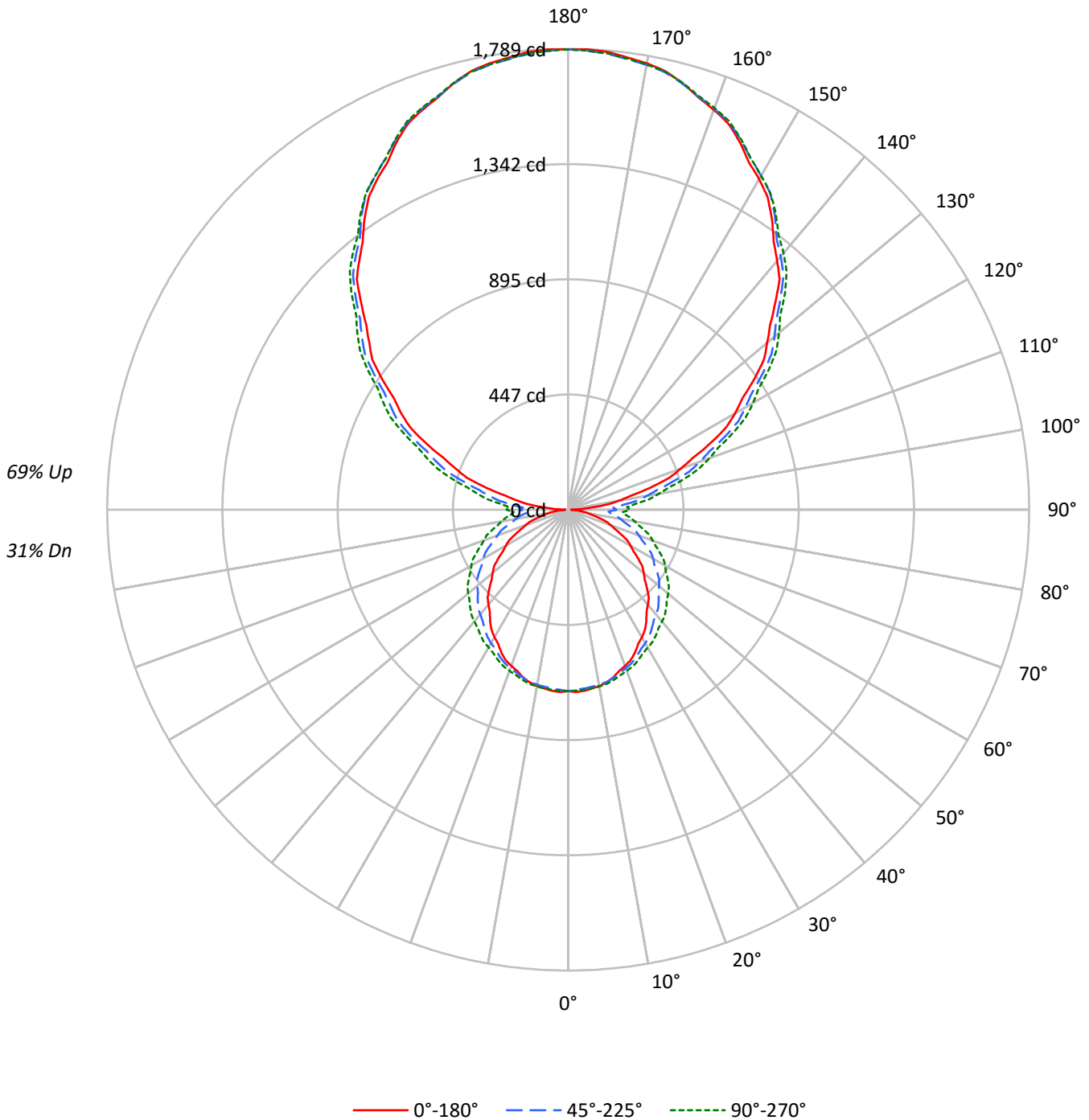
Input Watts (W): 68.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	103	103	103	103	92	92	92	92	73	73	73	55	55	55	39	39	39	31				
1	93	88	84	80	83	79	76	72	62	60	58	47	45	44	33	32	31	24				
2	84	76	70	65	75	69	63	59	54	50	47	41	38	36	28	27	25	20				
3	76	67	59	53	68	60	54	48	47	43	39	36	32	30	25	23	21	16				
4	70	59	51	45	62	53	46	41	42	37	33	31	28	25	22	20	18	14				
5	64	52	44	38	57	47	40	35	37	32	28	28	24	22	20	17	15	12				
6	58	46	38	33	52	42	35	30	33	28	24	25	22	19	18	15	13	10				
7	54	42	34	28	48	38	31	26	30	25	21	23	19	16	16	14	12	9				
8	50	38	30	25	45	34	27	23	27	22	19	21	17	14	15	12	10	8				
9	46	34	27	22	41	31	25	20	25	20	16	19	15	13	14	11	9	7				
10	43	31	24	19	39	28	22	18	23	18	15	18	14	12	13	10	8	6				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11373	11373	11373
5°	11428	10947	10905
10°	11356	10624	10504
15°	11200	10282	10083
20°	11002	9915	9676
25°	10807	9560	9307
30°	10532	9197	8935
35°	10254	8846	8673
40°	9960	8547	8413
45°	9681	8279	8190
50°	9382	8037	7969
55°	9070	7777	7745
60°	8686	7508	7509
65°	8287	7191	7227
70°	7841	6852	6923
75°	7270	6518	6643
80°	6370	6177	6361
85°	5506	5882	6138



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.7	0.9
10°-20°	191.4	2.5
20°-30°	290.0	3.8
30°-40°	353.3	4.6
40°-50°	380.0	4.9
50°-60°	369.1	4.8
60°-70°	322.3	4.2
70°-80°	248.1	3.2
80°-90°	173.6	2.3
90°-100°	227.9	3.0
100°-110°	435.3	5.7
110°-120°	656.3	8.5
120°-130°	821.2	10.7
130°-140°	900.0	11.7
140°-150°	872.0	11.3
150°-160°	729.5	9.5
160°-170°	483.8	6.3
170°-180°	169.1	2.2
0°-30°	548.2	7.1
0°-40°	901.4	11.7
0°-60°	1650.6	21.5
0°-90°	2394.5	31.1
90°-120°	1319.5	17.2
90°-150°	3912.7	50.9
90°-180°	5295.0	68.9
0°-180°	7689.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	704	704	704	704	704	
5°	706	703	697	703	702	67
15°	674	676	676	684	684	190
25°	612	620	629	641	644	281
35°	528	545	564	586	594	330
45°	433	461	496	527	538	334
55°	332	369	422	457	472	297
65°	227	277	337	377	392	225
75°	126	183	248	290	305	133
85°	37	100	165	207	222	40
90°	12	90	188	224	239	11
95°	87	150	214	251	262	96
105°	329	365	420	457	469	348
115°	607	629	670	698	706	600
125°	879	894	921	943	952	786
135°	1136	1153	1166	1185	1190	878
145°	1378	1388	1398	1405	1404	861
155°	1575	1580	1584	1591	1588	725
165°	1714	1713	1713	1722	1716	483
175°	1783	1779	1776	1785	1777	169
180°	1786	1786	1786	1786	1786	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4
2.5°	708.5	707.9	707.4	706.8	706.3	705.4	704.1	702.8	701.6	700.3	701.2
5°	706.4	705.7	705.1	704.4	703.7	702.7	701.3	700.0	698.6	697.2	698.6
7.5°	700.1	699.6	699.2	698.7	698.3	697.5	696.5	695.4	694.4	693.4	695.0
10°	695.2	694.7	694.3	693.8	693.4	692.8	692.1	691.5	690.8	690.1	691.9
12.5°	687.0	687.1	687.2	687.3	687.4	687.2	686.7	686.2	685.7	685.2	687.0
15°	673.8	674.2	674.7	675.1	675.6	675.8	675.8	675.8	675.8	675.8	677.8
17.5°	656.6	657.6	658.5	659.5	660.4	661.3	662.0	662.7	663.4	664.2	666.3
20°	645.2	646.3	647.4	648.6	649.7	650.7	651.6	652.6	653.5	654.4	656.9
22.5°	632.9	634.2	635.6	636.9	638.2	639.5	640.8	642.0	643.3	644.6	647.1
25°	612.5	614.1	615.7	617.3	618.9	620.7	622.7	624.8	626.8	628.8	631.6
27.5°	588.0	590.6	593.2	595.8	598.4	600.9	603.3	605.7	608.1	610.5	613.9
30°	571.7	574.6	577.6	580.5	583.5	586.4	589.4	592.3	595.3	598.2	601.8
32.5°	553.7	557.0	560.3	563.6	567.0	570.4	573.9	577.3	580.8	584.3	588.5
35°	527.8	531.6	535.5	539.3	543.2	547.3	551.6	555.9	560.2	564.5	569.5
37.5°	499.6	504.1	508.5	512.9	517.4	522.4	528.0	533.6	539.1	544.7	550.3
40°	480.8	485.8	490.8	495.8	500.8	506.3	512.5	518.6	524.7	530.8	536.7
42.5°	462.9	467.8	472.8	477.8	482.8	488.8	495.9	502.9	509.9	517.0	523.4
45°	432.8	439.0	445.1	451.2	457.3	464.4	472.3	480.3	488.2	496.1	503.2
47.5°	403.2	409.9	416.6	423.2	429.9	437.9	447.2	456.5	465.8	475.1	482.5
50°	382.8	389.9	396.9	403.9	410.9	419.6	429.8	440.0	450.2	460.4	468.1
52.5°	363.2	370.6	378.0	385.4	392.8	401.9	412.6	423.4	434.1	444.9	452.8
55°	331.8	339.9	348.1	356.3	364.4	374.4	386.2	398.0	409.8	421.6	429.8
57.5°	300.7	310.0	319.2	328.4	337.6	348.2	360.2	372.2	384.3	396.3	405.1
60°	278.7	288.4	298.2	308.0	317.7	329.1	342.0	354.9	367.8	380.8	389.4
62.5°	259.1	269.2	279.3	289.4	299.6	311.1	324.0	336.9	349.9	362.8	372.0
65°	226.6	237.7	248.9	260.0	271.1	283.3	296.7	310.1	323.5	336.9	346.2
67.5°	196.8	208.4	220.1	231.7	243.3	255.9	269.6	283.3	297.0	310.7	320.1
70°	175.6	187.4	199.2	211.0	222.8	235.7	249.8	263.8	277.9	292.0	301.7
72.5°	156.0	168.1	180.3	192.5	204.6	217.8	232.1	246.3	260.6	274.8	284.4
75°	125.6	138.3	151.0	163.7	176.4	190.0	204.5	219.0	233.5	248.1	257.8
77.5°	96.2	109.5	122.8	136.0	149.3	163.4	178.1	192.9	207.6	222.3	232.1
80°	76.6	90.4	104.2	118.1	131.9	146.2	161.0	175.7	190.4	205.2	214.7
82.5°	60.2	73.9	87.5	101.2	114.9	129.1	144.1	159.0	173.9	188.9	198.4
85°	36.8	50.8	64.9	78.9	93.0	107.3	121.8	136.3	150.9	165.4	174.9
87.5°	20.3	34.6	49.0	63.3	77.6	92.8	108.8	124.8	140.7	156.7	165.9
90°	11.7	28.9	46.1	63.2	80.4	100.0	121.8	143.7	165.6	187.5	195.9
92.5°	36.2	51.4	66.6	81.8	97.0	112.5	128.2	143.9	159.6	175.3	184.4
95°	86.6	100.6	114.6	128.6	142.6	156.8	171.0	185.3	199.6	213.9	222.5
97.5°	150.4	162.8	175.2	187.7	200.1	213.5	227.8	242.2	256.5	270.8	279.2
100°	198.6	209.7	220.8	231.8	242.9	255.3	269.0	282.7	296.4	310.1	318.5
102.5°	248.4	258.3	268.1	277.9	287.7	299.4	313.0	326.6	340.2	353.9	362.3
105°	329.2	336.8	344.4	352.0	359.6	369.6	382.1	394.5	407.0	419.5	428.1
107.5°	411.6	418.4	425.1	431.9	438.6	447.6	458.9	470.2	481.5	492.8	500.7
110°	463.9	470.4	477.0	483.5	490.1	498.9	510.0	521.1	532.3	543.4	550.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	521.8	527.6	533.4	539.2	545.1	553.1	563.4	573.7	584.0	594.3	600.8
115°	607.1	611.6	616.1	620.6	625.1	632.2	641.7	651.2	660.8	670.3	676.8
117.5°	691.1	695.4	699.7	704.1	708.4	714.3	721.9	729.4	737.0	744.5	750.5
120°	747.8	751.4	755.0	758.6	762.1	767.1	773.5	779.9	786.3	792.7	799.1
122.5°	799.7	803.2	806.8	810.4	814.0	819.1	825.7	832.4	839.1	845.7	851.1
125°	879.4	882.5	885.5	888.5	891.5	896.1	902.4	908.6	914.9	921.2	926.3
127.5°	958.1	961.7	965.3	968.9	972.5	976.6	981.3	985.9	990.6	995.2	999.6
130°	1007.6	1011.7	1015.8	1020.0	1024.1	1028.2	1032.3	1036.4	1040.5	1044.6	1049.4
132.5°	1063.1	1066.4	1069.7	1073.0	1076.4	1079.9	1083.7	1087.5	1091.4	1095.2	1099.0
135°	1136.2	1139.9	1143.6	1147.3	1151.0	1154.3	1157.2	1160.1	1163.1	1166.0	1170.4
137.5°	1214.3	1217.3	1220.2	1223.2	1226.2	1228.6	1230.5	1232.3	1234.2	1236.1	1240.0
140°	1261.3	1264.1	1266.9	1269.7	1272.5	1275.0	1277.1	1279.2	1281.3	1283.5	1287.1
142.5°	1309.6	1312.4	1315.2	1317.9	1320.7	1322.7	1324.0	1325.2	1326.4	1327.7	1330.8
145°	1377.9	1380.3	1382.6	1384.9	1387.3	1389.5	1391.5	1393.5	1395.5	1397.5	1399.2
147.5°	1439.7	1442.5	1445.3	1448.2	1451.0	1453.1	1454.4	1455.7	1457.1	1458.4	1459.3
150°	1481.9	1483.9	1486.0	1488.0	1490.0	1491.6	1493.0	1494.3	1495.7	1497.0	1498.0
152.5°	1519.3	1521.3	1523.3	1525.3	1527.4	1529.2	1530.8	1532.4	1534.0	1535.6	1536.9
155°	1575.4	1576.4	1577.4	1578.4	1579.4	1580.4	1581.4	1582.4	1583.4	1584.4	1586.1
157.5°	1623.3	1624.0	1624.7	1625.4	1626.0	1626.7	1627.3	1627.9	1628.5	1629.1	1631.3
160°	1652.3	1653.0	1653.6	1654.3	1655.0	1655.5	1655.8	1656.1	1656.5	1656.8	1658.8
162.5°	1678.8	1679.0	1679.1	1679.2	1679.4	1679.6	1679.9	1680.3	1680.6	1680.9	1683.2
165°	1714.1	1713.8	1713.4	1713.1	1712.8	1712.6	1712.6	1712.6	1712.6	1712.6	1714.9
167.5°	1743.6	1742.6	1741.6	1740.6	1739.6	1739.1	1739.0	1739.0	1738.9	1738.8	1741.2
170°	1759.3	1758.3	1757.3	1756.3	1755.3	1754.6	1754.3	1754.0	1753.6	1753.3	1755.6
172.5°	1770.2	1769.2	1768.2	1767.2	1766.2	1765.5	1765.2	1764.8	1764.5	1764.1	1766.5
175°	1783.4	1782.4	1781.4	1780.4	1779.4	1778.6	1777.9	1777.2	1776.6	1775.9	1778.3
177.5°	1788.9	1788.1	1787.3	1786.5	1785.7	1785.0	1784.4	1783.9	1783.4	1782.8	1784.4
180°	1786.5	1786.5	1786.5	1786.5	1786.5	1786.5	1786.5	1786.5	1786.5	1786.5	1786.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4
2.5°	702.1	703.0	703.9	704.2	703.8	703.5	703.1	702.8
5°	700.0	701.3	702.7	703.3	703.0	702.8	702.6	702.3
7.5°	696.6	698.3	699.9	700.6	700.4	700.1	699.9	699.7
10°	693.7	695.5	697.4	698.1	697.9	697.7	697.5	697.2
12.5°	688.8	690.6	692.5	693.2	693.0	692.8	692.6	692.3
15°	679.9	681.9	684.0	684.9	684.7	684.4	684.2	684.0
17.5°	668.4	670.6	672.7	673.8	673.8	673.8	673.8	673.8
20°	659.4	661.9	664.3	665.6	665.6	665.6	665.6	665.6
22.5°	649.6	652.1	654.5	656.0	656.3	656.7	657.1	657.4
25°	634.3	637.0	639.7	641.4	642.1	642.8	643.5	644.2
27.5°	617.4	620.8	624.3	626.2	626.7	627.2	627.7	628.2
30°	605.5	609.1	612.7	614.9	615.6	616.3	616.9	617.6
32.5°	592.7	596.9	601.0	603.7	605.0	606.2	607.4	608.6
35°	574.5	579.5	584.5	587.8	589.4	591.0	592.5	594.1
37.5°	555.8	561.3	566.9	570.5	572.2	573.8	575.5	577.2
40°	542.6	548.5	554.4	558.4	560.4	562.5	564.5	566.6
42.5°	529.8	536.3	542.7	547.0	549.0	551.1	553.1	555.1
45°	510.2	517.2	524.3	528.9	531.2	533.5	535.7	538.0
47.5°	489.8	497.2	504.5	509.4	511.9	514.4	516.9	519.4
50°	475.8	483.5	491.3	496.4	498.9	501.4	503.8	506.3
52.5°	460.7	468.6	476.5	481.8	484.4	487.1	489.8	492.5
55°	437.9	446.1	454.3	459.8	462.8	465.7	468.7	471.6
57.5°	413.9	422.7	431.5	437.4	440.4	443.4	446.4	449.4
60°	398.0	406.6	415.3	421.2	424.3	427.5	430.7	433.9
62.5°	381.1	390.3	399.5	405.6	408.5	411.5	414.5	417.5
65°	355.5	364.8	374.1	380.2	383.2	386.1	389.1	392.0
67.5°	329.5	338.9	348.3	354.6	357.6	360.7	363.8	366.9
70°	311.5	321.2	331.0	337.2	339.9	342.7	345.4	348.1
72.5°	294.0	303.5	313.1	319.5	322.8	326.1	329.3	332.6
75°	267.6	277.3	287.1	293.4	296.4	299.3	302.3	305.2
77.5°	241.8	251.5	261.2	267.6	270.8	274.0	277.1	280.3
80°	224.2	233.8	243.3	249.7	252.8	256.0	259.2	262.4
82.5°	207.9	217.4	227.0	233.2	236.2	239.2	242.2	245.2
85°	184.4	194.0	203.5	209.8	213.0	216.2	219.4	222.5
87.5°	175.0	184.1	193.2	199.3	202.2	205.2	208.2	211.2
90°	204.3	212.7	221.1	226.9	229.9	233.0	236.0	239.1
92.5°	193.4	202.4	211.4	217.4	220.1	222.9	225.7	228.5
95°	231.1	239.7	248.4	253.7	255.8	257.8	259.9	261.9
97.5°	287.6	296.0	304.4	309.9	312.5	315.1	317.7	320.3
100°	326.9	335.3	343.7	349.0	351.1	353.3	355.5	357.6
102.5°	370.8	379.3	387.8	393.1	395.3	397.4	399.6	401.7
105°	436.7	445.3	453.9	459.4	461.9	464.4	466.9	469.4
107.5°	508.6	516.5	524.4	528.8	529.7	530.7	531.6	532.6
110°	557.9	565.2	572.4	576.8	578.3	579.8	581.3	582.7



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CATALOG NUMBER: S122DIW-S675D1440U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	607.3	613.7	620.2	624.3	626.0	627.8	629.5	631.3
115°	683.2	689.7	696.2	700.2	701.7	703.1	704.6	706.1
117.5°	756.4	762.3	768.2	771.8	773.1	774.4	775.7	777.0
120°	805.4	811.8	818.1	822.0	823.5	825.0	826.5	828.0
122.5°	856.4	861.8	867.2	870.6	871.9	873.3	874.7	876.1
125°	931.4	936.5	941.6	945.0	946.8	948.5	950.2	951.9
127.5°	1004.1	1008.5	1012.9	1015.6	1016.5	1017.4	1018.3	1019.3
130°	1054.1	1058.9	1063.7	1066.3	1066.8	1067.3	1067.7	1068.2
132.5°	1102.7	1106.5	1110.3	1112.6	1113.3	1114.1	1114.8	1115.6
135°	1174.9	1179.3	1183.7	1186.4	1187.2	1188.0	1188.8	1189.6
137.5°	1243.9	1247.8	1251.7	1253.8	1254.0	1254.2	1254.4	1254.6
140°	1290.7	1294.4	1298.0	1299.8	1299.8	1299.9	1299.9	1299.9
142.5°	1334.0	1337.2	1340.4	1341.9	1341.7	1341.5	1341.4	1341.2
145°	1400.9	1402.6	1404.3	1405.0	1404.8	1404.6	1404.4	1404.2
147.5°	1460.3	1461.2	1462.1	1462.2	1461.5	1460.7	1460.0	1459.3
150°	1499.0	1500.0	1501.0	1501.0	1500.0	1499.0	1498.0	1497.0
152.5°	1538.1	1539.4	1540.7	1540.7	1539.4	1538.1	1536.9	1535.6
155°	1587.8	1589.5	1591.1	1591.5	1590.5	1589.5	1588.5	1587.5
157.5°	1633.6	1635.9	1638.2	1638.5	1636.9	1635.3	1633.7	1632.1
160°	1660.8	1662.8	1664.8	1665.2	1663.8	1662.5	1661.2	1659.8
162.5°	1685.5	1687.8	1690.0	1690.4	1688.8	1687.2	1685.6	1683.9
165°	1717.3	1719.6	1722.0	1722.3	1720.6	1719.0	1717.3	1715.6
167.5°	1743.5	1745.9	1748.2	1748.5	1746.8	1745.0	1743.3	1741.5
170°	1758.0	1760.3	1762.7	1762.8	1760.8	1758.8	1756.8	1754.8
172.5°	1768.8	1771.2	1773.5	1773.7	1771.7	1769.7	1767.7	1765.7
175°	1780.6	1782.9	1785.3	1785.5	1783.4	1781.4	1779.4	1777.4
177.5°	1786.1	1787.7	1789.3	1789.3	1787.7	1786.1	1784.4	1782.8
180°	1786.5	1786.5	1786.5	1786.5	1786.5	1786.5	1786.5	1786.5

(END OF REPORT)