

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: P331996-830

Luminaire Tested: **S123DIP-S775D1195U830-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331996-830
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-S775D1195U830-4F0-1E-UDD-D4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1195 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7118.8 lumens
Efficiency: N/A
Efficacy: 125.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

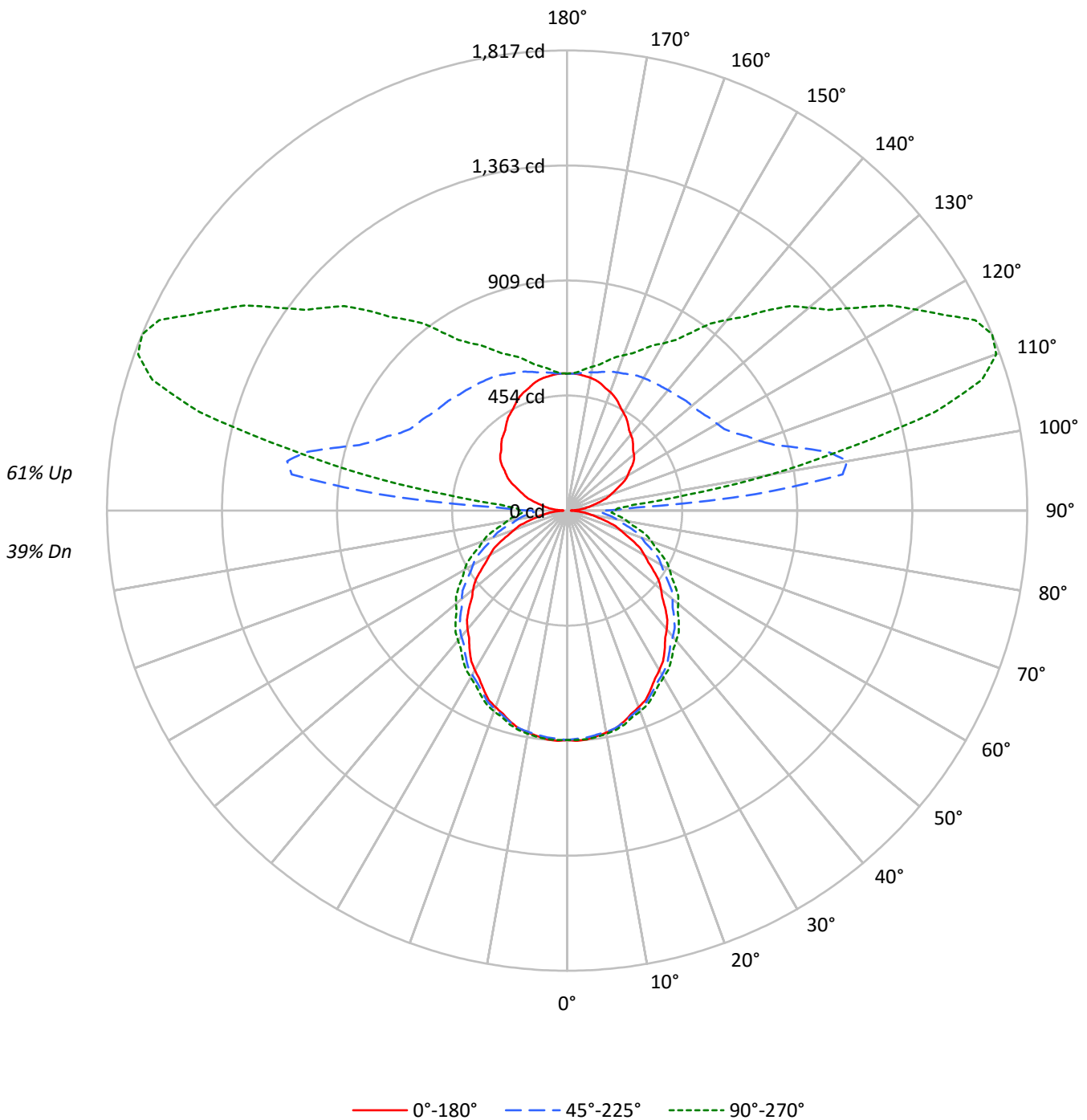
Input Watts (W): 56.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331996-830

CATALOG NUMBER: S123DIP-S775D1195U830-4F0-1E-UDD-D4

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	105	105	105	105	95	95	95	95	77	77	77	61	61	61	46	46	46	39
1	95	90	86	82	86	82	78	75	66	64	62	52	51	49	40	38	37	31
2	86	78	72	66	78	71	66	61	58	54	50	46	43	40	34	32	31	26
3	78	68	61	55	70	62	56	50	51	46	42	40	37	34	30	28	26	21
4	71	60	52	46	64	55	48	42	45	40	35	35	32	29	27	24	22	18
5	65	53	45	39	59	49	42	36	40	35	30	32	28	25	24	21	19	16
6	60	48	40	34	54	44	36	31	36	30	26	29	25	21	22	19	17	14
7	55	43	35	29	50	39	32	27	32	27	23	26	22	19	20	17	15	12
8	51	39	31	26	46	36	29	24	29	24	20	24	20	17	18	15	13	11
9	48	35	28	23	43	33	26	21	27	22	18	22	18	15	17	14	12	10
10	44	32	25	20	40	30	23	19	25	20	16	20	16	13	15	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9752	9752	9752
5°	9782	9507	9512
10°	9694	9287	9240
15°	9570	9038	8945
20°	9390	8755	8621
25°	9171	8428	8278
30°	8945	8133	7931
35°	8692	7823	7655
40°	8450	7540	7358
45°	8182	7269	7122
50°	7918	7000	6860
55°	7627	6725	6625
60°	7343	6446	6385
65°	7051	6149	6098
70°	6611	5815	5805
75°	6055	5432	5506
80°	5416	5056	5164
85°	4828	4799	4966



TEST NUMBER: P331996-830

CATALOG NUMBER: S123DIP-S775D1195U830-4F0-1E-UDD-D4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.9	1.2
10°-20°	244.8	3.4
20°-30°	366.2	5.1
30°-40°	437.3	6.1
40°-50°	457.5	6.4
50°-60°	429.4	6.0
60°-70°	358.6	5.0
70°-80°	256.6	3.6
80°-90°	157.2	2.2
90°-100°	397.1	5.6
100°-110°	923.0	13.0
110°-120°	885.7	12.4
120°-130°	695.8	9.8
130°-140°	539.5	7.6
140°-150°	396.2	5.6
150°-160°	274.4	3.9
160°-170°	161.2	2.3
170°-180°	52.4	0.7
0°-30°	696.9	9.8
0°-40°	1134.2	15.9
0°-60°	2021.1	28.4
0°-90°	2793.4	39.2
90°-120°	2205.8	31.0
90°-150°	3837.3	53.9
90°-180°	4325.0	60.8
0°-180°	7118.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	906	906	906	906	906	
5°	907	905	899	906	906	86
15°	864	866	866	875	874	243
25°	780	789	792	805	805	359
35°	671	687	700	714	718	420
45°	549	572	597	615	624	423
55°	418	451	486	512	521	375
65°	289	328	371	400	411	286
75°	157	203	253	284	297	168
85°	48	98	150	182	193	51
90°	15	74	139	174	187	11
95°	48	171	747	317	265	49
105°	135	220	954	1640	1503	143
115°	229	298	726	1552	1778	227
125°	315	373	660	1190	1395	280
135°	368	438	632	967	1118	284
145°	418	478	612	777	858	262
155°	474	511	592	673	702	218
165°	518	533	567	602	612	146
175°	540	540	544	552	551	51
180°	541	541	541	541	541	



TEST NUMBER: P331996-830

CATALOG NUMBER: S123DIP-S775D1195U830-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0
2.5°	909.9	909.4	908.9	908.3	907.9	906.8	905.5	904.1	902.7	901.3	902.7
5°	907.0	906.5	906.1	905.7	905.2	904.4	903.1	901.7	900.4	899.1	900.9
7.5°	898.1	898.1	898.2	898.3	898.4	897.9	896.5	895.3	894.0	892.8	894.9
10°	890.2	890.6	891.1	891.6	891.9	891.6	890.5	889.5	888.3	887.2	889.5
12.5°	880.7	881.4	881.9	882.6	883.2	883.2	882.4	881.7	880.9	880.1	882.1
15°	863.6	864.2	864.9	865.5	866.2	866.4	866.2	866.0	865.7	865.5	867.7
17.5°	841.9	843.2	844.5	845.7	847.1	847.7	847.6	847.5	847.4	847.3	849.3
20°	826.0	827.4	828.7	830.0	831.3	832.2	832.6	833.1	833.5	834.0	835.9
22.5°	809.5	810.8	812.1	813.4	814.7	815.7	816.3	816.9	817.6	818.1	820.7
25°	779.7	781.8	784.0	786.3	788.4	789.9	790.5	791.2	791.8	792.5	795.3
27.5°	749.7	752.1	754.7	757.1	759.7	761.6	763.0	764.4	765.8	767.2	769.7
30°	728.3	731.2	734.1	736.9	739.7	742.1	743.8	745.6	747.3	749.0	751.7
32.5°	704.6	707.8	711.1	714.3	717.5	720.2	722.5	724.8	727.1	729.3	732.2
35°	671.1	674.6	678.2	681.6	685.1	688.3	691.2	694.0	696.9	699.7	703.0
37.5°	635.6	639.5	643.5	647.4	651.4	655.1	658.6	662.1	665.6	669.1	672.9
40°	611.9	615.9	619.8	623.8	627.6	631.9	636.2	640.6	645.0	649.4	653.1
42.5°	585.8	590.7	595.5	600.3	605.1	609.8	614.3	619.0	623.5	628.1	632.2
45°	548.7	554.0	559.2	564.5	569.8	575.1	580.6	586.1	591.6	597.1	601.2
47.5°	509.8	515.9	521.8	527.7	533.7	539.8	546.1	552.3	558.6	564.9	569.6
50°	484.6	490.7	496.8	503.0	509.2	515.6	522.5	529.2	536.0	542.8	547.8
52.5°	457.7	464.2	470.7	477.2	483.7	490.7	498.2	505.7	513.2	520.7	525.9
55°	418.5	425.7	432.9	440.2	447.4	455.0	462.9	470.8	478.6	486.5	492.5
57.5°	380.1	387.7	395.2	402.7	410.4	418.4	427.1	435.7	444.3	453.0	458.9
60°	353.4	361.2	369.1	377.0	384.9	393.3	402.4	411.3	420.3	429.3	435.5
62.5°	328.0	336.1	344.2	352.2	360.3	369.1	378.6	388.1	397.7	407.2	413.3
65°	289.2	297.7	306.2	314.8	323.4	332.4	342.1	351.8	361.5	371.1	377.7
67.5°	249.7	258.7	267.9	276.9	286.0	295.5	305.3	315.1	324.9	334.8	342.0
70°	222.1	231.5	240.9	250.3	259.8	269.8	280.3	290.8	301.3	311.9	318.9
72.5°	196.8	206.2	215.7	225.1	234.5	244.7	255.5	266.5	277.3	288.1	295.4
75°	156.9	167.2	177.6	187.8	198.1	208.8	219.7	230.7	241.7	252.7	259.9
77.5°	122.2	132.6	143.0	153.4	163.7	174.5	185.6	196.6	207.6	218.7	226.3
80°	97.7	108.5	119.2	130.0	140.7	151.7	163.2	174.6	186.0	197.4	204.8
82.5°	76.3	87.3	98.2	109.1	120.1	131.3	142.9	154.5	166.1	177.7	185.1
85°	48.4	59.3	70.3	81.2	92.2	103.5	115.2	126.8	138.4	150.1	157.5
87.5°	26.7	38.1	49.4	61.0	72.4	83.9	95.7	107.5	119.3	131.2	138.5
90°	15.0	28.0	40.9	55.0	67.9	81.1	95.5	110.0	124.4	138.9	145.2
92.5°	25.6	41.8	60.8	79.0	97.9	124.5	164.2	222.3	279.5	273.6	239.5
95°	48.1	59.9	80.5	107.7	144.7	197.1	301.0	474.9	665.2	747.1	631.2
97.5°	73.1	82.0	99.2	123.1	158.8	214.1	313.2	507.5	817.1	1097.0	1173.8
100°	89.9	98.0	112.7	135.1	168.3	219.6	306.3	478.5	776.7	1122.9	1345.0
102.5°	107.5	115.8	128.9	149.7	179.6	227.0	305.7	453.1	719.5	1061.2	1348.9
105°	135.0	143.5	155.3	173.7	199.8	241.1	309.6	431.9	648.3	954.5	1274.9
107.5°	163.1	170.9	181.6	199.1	223.0	261.3	322.2	424.8	600.7	859.5	1150.8
110°	183.3	190.6	200.0	215.9	238.6	275.6	333.7	425.7	581.2	805.6	1073.1



TEST NUMBER: P331996-830

CATALOG NUMBER: S123DIP-S775D1195U830-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	202.6	209.2	217.8	233.2	255.1	290.6	344.8	430.4	568.0	767.6	1004.2
115°	229.4	236.5	245.6	259.2	280.5	315.3	364.9	439.5	559.1	725.8	920.5
117.5°	257.0	263.7	270.8	282.5	304.9	336.9	385.4	452.4	554.7	697.9	866.9
120°	275.5	279.9	286.4	298.5	320.5	351.9	398.6	462.8	554.4	684.3	838.2
122.5°	292.2	296.1	302.1	314.4	335.0	367.9	413.3	472.7	556.9	674.2	814.0
125°	315.1	317.3	323.9	335.8	356.7	389.5	434.1	488.6	560.7	660.2	781.9
127.5°	333.3	336.3	344.2	356.3	379.0	411.1	453.4	502.0	566.4	650.3	753.0
130°	344.6	347.7	357.3	370.2	393.0	424.7	465.2	511.2	570.3	643.8	736.6
132.5°	352.6	356.8	367.4	383.1	406.0	436.5	475.3	519.5	572.5	638.9	721.0
135°	367.8	371.9	383.7	399.9	422.7	453.4	489.7	529.3	575.6	631.7	700.2
137.5°	382.0	386.4	398.0	415.4	438.0	466.0	500.0	536.8	577.1	624.5	682.1
140°	390.9	396.3	407.3	424.8	446.7	474.4	506.8	540.4	578.2	620.5	670.9
142.5°	401.3	405.8	417.5	433.0	454.8	480.3	511.3	543.5	578.2	615.6	660.3
145°	418.2	421.3	430.9	447.1	465.5	490.6	519.1	548.7	579.3	612.2	648.9
147.5°	434.3	436.3	445.9	460.1	478.2	499.5	525.7	552.1	579.3	608.0	638.6
150°	445.7	446.8	455.5	469.8	485.1	504.8	530.0	553.0	579.3	604.5	631.9
152.5°	457.1	457.3	466.1	478.5	492.1	511.0	532.6	554.8	576.6	600.1	624.9
155°	474.2	474.2	480.8	491.7	503.7	519.1	537.7	555.3	573.8	592.5	614.3
157.5°	487.8	488.6	493.9	503.5	513.8	525.7	540.5	556.3	570.1	585.7	602.5
160°	498.2	498.2	502.7	511.4	519.1	530.0	543.2	556.3	568.4	580.4	594.7
162.5°	506.1	506.1	509.6	516.7	523.5	532.6	544.0	555.4	564.9	575.1	586.7
165°	518.0	516.9	519.1	524.5	529.0	536.6	545.4	553.0	559.6	567.2	576.0
167.5°	527.0	525.7	526.7	530.9	534.0	538.8	545.2	551.3	554.3	559.4	565.7
170°	532.3	530.0	531.1	534.4	536.6	538.8	544.2	548.7	550.8	554.1	559.6
172.5°	535.7	534.4	534.6	537.1	538.4	539.7	544.2	547.8	548.2	549.7	553.5
175°	539.9	538.8	537.7	539.9	539.9	541.0	543.2	545.4	544.2	544.2	546.5
177.5°	541.9	541.0	540.1	541.0	541.0	541.0	541.9	543.6	541.9	541.0	541.9
180°	541.0	541.0	541.0	541.0	541.0	541.0	541.0	541.0	541.0	541.0	541.0



TEST NUMBER: P331996-830

CATALOG NUMBER: S123DIP-S775D1195U830-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0
2.5°	904.1	905.5	906.8	907.5	907.3	907.1	906.9	906.8
5°	902.6	904.4	906.1	906.8	906.6	906.4	906.3	906.0
7.5°	897.1	899.4	901.5	902.5	902.2	902.0	901.7	901.4
10°	891.6	893.8	896.0	896.9	896.5	896.0	895.6	895.1
12.5°	884.2	886.2	888.2	889.0	888.5	888.2	887.7	887.2
15°	869.9	872.1	874.3	875.2	875.1	874.9	874.6	874.4
17.5°	851.3	853.3	855.3	856.1	855.8	855.5	855.2	854.9
20°	837.9	839.9	841.9	842.9	843.2	843.4	843.6	843.9
22.5°	823.1	825.7	828.1	829.3	829.2	829.1	829.0	828.8
25°	798.2	801.1	803.9	805.3	805.3	805.3	805.3	805.3
27.5°	772.1	774.6	777.0	778.4	778.5	778.7	778.9	779.1
30°	754.3	757.0	759.6	760.9	760.9	760.9	760.9	760.9
32.5°	734.9	737.7	740.6	742.3	742.7	743.3	743.8	744.3
35°	706.3	709.6	712.8	715.0	715.9	716.7	717.6	718.5
37.5°	676.6	680.3	684.0	686.3	686.9	687.7	688.3	689.1
40°	656.9	660.5	664.3	666.6	667.5	668.4	669.2	670.1
42.5°	636.2	640.3	644.4	647.1	648.3	649.5	650.7	652.0
45°	605.4	609.5	613.8	616.7	618.5	620.2	622.0	623.8
47.5°	574.3	579.0	583.7	586.7	588.1	589.5	590.8	592.1
50°	552.9	557.9	563.0	566.3	567.8	569.3	570.9	572.4
52.5°	531.1	536.4	541.6	545.2	547.1	548.9	550.8	552.7
55°	498.4	504.4	510.2	514.1	515.9	517.6	519.3	521.1
57.5°	465.0	470.9	476.8	480.9	483.0	485.0	487.0	489.1
60°	441.6	447.7	453.8	458.2	460.5	463.0	465.4	467.8
62.5°	419.5	425.7	431.8	435.9	438.2	440.5	442.7	444.9
65°	384.3	390.8	397.4	401.8	404.0	406.1	408.4	410.6
67.5°	349.1	356.4	363.5	368.1	369.9	371.7	373.6	375.4
70°	325.9	332.9	340.0	344.5	346.8	348.9	351.1	353.4
72.5°	302.6	309.7	317.0	321.7	323.9	326.0	328.2	330.5
75°	267.1	274.4	281.6	286.5	289.2	291.8	294.5	297.1
77.5°	233.9	241.6	249.2	254.0	256.1	258.1	260.1	262.1
80°	212.3	219.7	227.2	232.1	234.2	236.4	238.7	240.8
82.5°	192.6	200.0	207.5	212.3	214.5	216.7	218.9	221.0
85°	164.9	172.4	179.8	184.6	186.8	189.1	191.2	193.4
87.5°	146.1	153.8	161.5	166.7	168.7	171.2	173.5	175.5
90°	153.8	162.4	170.9	178.0	179.0	182.3	185.6	186.7
92.5°	212.0	200.2	199.0	197.9	197.9	196.7	199.8	199.8
95°	505.6	385.3	334.0	299.2	280.5	272.9	267.4	265.2
97.5°	1086.4	897.4	762.6	636.0	557.4	510.3	483.0	475.7
100°	1389.7	1307.3	1185.6	1034.3	926.0	848.2	807.7	811.0
102.5°	1487.1	1490.4	1421.9	1327.6	1243.7	1182.6	1149.1	1126.1
105°	1510.0	1625.6	1652.6	1628.1	1579.7	1540.0	1507.0	1503.4
107.5°	1416.2	1599.9	1701.8	1744.6	1747.4	1735.3	1725.4	1717.3
110°	1329.6	1536.7	1680.5	1760.8	1793.2	1803.7	1803.3	1802.9



TEST NUMBER: P331996-830

CATALOG NUMBER: S123DIP-S775D1195U830-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1243.0	1454.3	1614.6	1716.8	1774.8	1803.9	1814.2	1816.6
115°	1128.3	1324.2	1490.4	1613.3	1697.1	1747.1	1770.8	1778.0
117.5°	1043.2	1212.9	1362.6	1487.2	1574.6	1631.4	1664.7	1673.9
120°	997.7	1150.6	1287.0	1400.9	1488.9	1551.8	1579.6	1587.7
122.5°	961.0	1099.7	1226.3	1332.3	1410.6	1467.4	1497.8	1507.7
125°	911.3	1035.4	1145.1	1235.8	1307.4	1357.1	1386.0	1395.2
127.5°	867.2	978.1	1077.2	1159.9	1223.8	1266.5	1292.7	1301.2
130°	839.3	942.1	1034.9	1112.1	1171.5	1212.2	1236.5	1246.6
132.5°	813.1	907.8	994.4	1068.1	1124.1	1165.0	1186.8	1194.5
135°	777.5	859.2	934.3	999.3	1054.0	1088.0	1108.8	1117.6
137.5°	744.9	812.1	876.8	933.3	979.5	1013.9	1031.6	1037.7
140°	725.7	784.8	840.7	889.9	932.6	964.4	983.0	983.0
142.5°	706.9	757.8	806.3	849.2	885.8	914.1	930.9	930.9
145°	685.8	723.7	760.4	793.5	821.8	845.6	855.3	858.4
147.5°	668.6	697.9	726.6	749.8	771.5	787.8	796.9	798.5
150°	657.0	682.2	705.2	726.2	743.1	755.6	762.6	763.1
152.5°	647.4	669.1	689.5	706.8	719.8	731.0	735.1	735.2
155°	632.9	650.4	666.9	680.0	689.9	698.7	700.9	701.9
157.5°	617.6	632.4	645.0	655.3	663.8	670.4	672.1	671.9
160°	608.9	620.9	631.9	639.5	647.2	653.7	653.7	652.7
162.5°	598.3	608.7	618.7	625.5	630.6	636.2	636.2	635.2
165°	584.8	591.4	599.0	604.5	608.9	613.2	612.2	612.2
167.5°	573.0	578.0	582.4	586.4	588.2	591.4	590.2	590.2
170°	565.1	568.4	572.7	575.0	576.0	578.2	577.1	577.1
172.5°	558.1	560.4	564.0	565.2	565.5	567.7	565.7	564.9
175°	548.7	549.7	552.0	552.0	552.0	553.0	552.0	550.8
177.5°	542.7	543.6	544.5	544.5	543.6	544.5	542.7	542.7
180°	541.0	541.0	541.0	541.0	541.0	541.0	541.0	541.0

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