

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: P331994-940

Luminaire Tested: **S123DIP-S775D1195U940-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331994-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S775D1195U940-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1195 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7136.6 lumens
Efficiency: N/A
Efficacy: 125.4 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

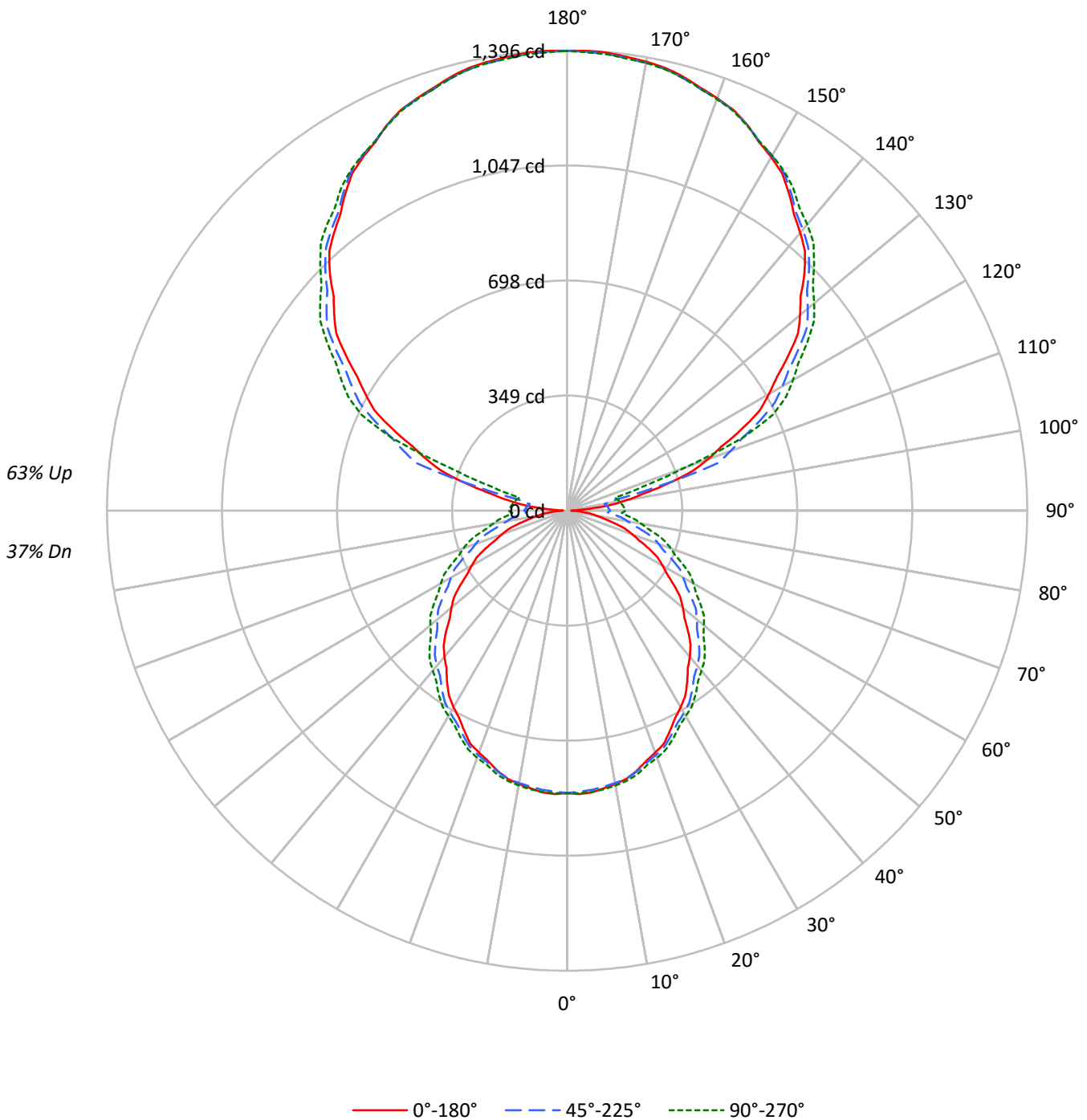
Input Watts (W): 56.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P331994-940

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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	104	104	104	104	94	94	94	94	76	76	76	59	59	59	44	44	44
1	94	89	85	82	85	81	78	74	65	63	61	51	49	48	38	37	36
2	85	78	71	66	77	70	65	60	57	53	50	44	42	39	33	31	29
3	78	68	61	55	70	62	55	50	50	45	41	39	36	33	29	27	25
4	71	60	52	46	64	54	48	42	44	39	35	35	31	28	26	23	21
5	65	53	45	39	58	48	41	36	39	34	30	31	27	24	23	20	18
6	60	48	39	34	54	43	36	31	35	30	26	28	24	21	21	18	16
7	55	43	35	29	50	39	32	27	32	27	23	25	21	18	19	16	14
8	51	39	31	26	46	35	29	24	29	24	20	23	19	16	17	15	13
9	47	35	28	23	43	32	26	21	26	21	18	21	17	15	16	13	11
10	44	32	25	20	40	30	23	19	24	19	16	19	16	13	15	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9226	9226	9226
5°	9255	8994	8999
10°	9172	8787	8743
15°	9054	8552	8462
20°	8884	8283	8155
25°	8676	7974	7832
30°	8462	7695	7504
35°	8223	7401	7242
40°	7995	7134	6961
45°	7742	6877	6737
50°	7490	6622	6490
55°	7215	6363	6268
60°	6946	6099	6041
65°	6670	5818	5769
70°	6254	5502	5492
75°	5730	5140	5210
80°	5128	4782	4885
85°	4559	4540	4699



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.3	1.1
10°-20°	231.6	3.2
20°-30°	346.4	4.9
30°-40°	413.7	5.8
40°-50°	432.9	6.1
50°-60°	406.2	5.7
60°-70°	339.3	4.8
70°-80°	242.7	3.4
80°-90°	148.6	2.1
90°-100°	141.5	2.0
100°-110°	308.4	4.3
110°-120°	625.0	8.8
120°-130°	764.5	10.7
130°-140°	801.1	11.2
140°-150°	740.9	10.4
150°-160°	595.7	8.3
160°-170°	384.4	5.4
170°-180°	132.5	1.9
0°-30°	659.3	9.2
0°-40°	1073.0	15.0
0°-60°	1912.1	26.8
0°-90°	2642.7	37.0
90°-120°	1074.8	15.1
90°-150°	3381.3	47.4
90°-180°	4494.0	63.0
0°-180°	7136.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	857	857	857	857	857	
5°	858	856	851	858	857	81
15°	817	820	819	828	827	230
25°	738	747	750	761	762	340
35°	635	650	662	675	680	397
45°	519	542	565	582	590	400
55°	396	427	460	484	493	354
65°	274	310	351	378	388	270
75°	148	192	239	269	281	159
85°	46	93	142	172	183	48
90°	13	70	130	165	178	11
95°	74	71	125	159	170	86
105°	316	345	297	149	150	335
115°	584	603	644	676	688	576
125°	819	829	859	880	889	732
135°	1018	1024	1038	1057	1059	784
145°	1174	1180	1182	1191	1195	734
155°	1292	1290	1291	1295	1290	595
165°	1362	1359	1358	1366	1359	385
175°	1394	1390	1390	1397	1389	133
180°	1394	1394	1394	1394	1394	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1
2.5°	860.9	860.3	859.9	859.3	858.9	857.9	856.7	855.3	854.0	852.7	854.0
5°	858.1	857.6	857.2	856.8	856.4	855.6	854.3	853.1	851.9	850.6	852.3
7.5°	849.6	849.7	849.8	849.9	850.0	849.4	848.2	847.0	845.8	844.6	846.7
10°	842.2	842.6	843.0	843.5	843.8	843.6	842.5	841.5	840.4	839.4	841.5
12.5°	833.2	833.8	834.4	835.0	835.5	835.5	834.8	834.1	833.4	832.7	834.6
15°	817.0	817.6	818.2	818.9	819.5	819.7	819.5	819.3	819.0	818.9	820.9
17.5°	796.5	797.7	799.0	800.1	801.4	802.0	801.9	801.8	801.7	801.6	803.5
20°	781.5	782.7	784.0	785.2	786.5	787.3	787.7	788.2	788.5	789.0	790.9
22.5°	765.8	767.0	768.3	769.5	770.8	771.7	772.3	772.8	773.5	774.0	776.4
25°	737.6	739.7	741.7	743.9	745.9	747.3	747.9	748.5	749.1	749.8	752.4
27.5°	709.3	711.6	714.0	716.3	718.7	720.5	721.8	723.2	724.5	725.9	728.2
30°	689.0	691.8	694.5	697.1	699.8	702.0	703.6	705.3	707.0	708.6	711.1
32.5°	666.6	669.7	672.7	675.7	678.8	681.4	683.5	685.7	687.9	690.0	692.7
35°	634.9	638.2	641.6	644.9	648.2	651.2	653.9	656.6	659.3	662.0	665.1
37.5°	601.3	605.0	608.8	612.5	616.3	619.7	623.1	626.4	629.7	633.0	636.6
40°	578.9	582.6	586.4	590.1	593.8	597.8	601.9	606.1	610.2	614.4	617.9
42.5°	554.2	558.8	563.4	567.9	572.5	576.9	581.2	585.6	589.9	594.2	598.1
45°	519.2	524.1	529.1	534.0	539.0	544.1	549.3	554.5	559.7	564.9	568.8
47.5°	482.3	488.0	493.7	499.3	504.9	510.7	516.7	522.5	528.5	534.4	538.9
50°	458.4	464.2	470.0	475.9	481.7	487.8	494.3	500.7	507.1	513.5	518.3
52.5°	433.0	439.2	445.3	451.5	457.6	464.2	471.4	478.4	485.5	492.6	497.6
55°	395.9	402.7	409.6	416.4	423.3	430.4	437.9	445.4	452.8	460.3	465.9
57.5°	359.6	366.8	373.9	381.0	388.3	395.8	404.0	412.2	420.4	428.6	434.2
60°	334.3	341.7	349.2	356.7	364.2	372.1	380.7	389.1	397.6	406.2	412.0
62.5°	310.3	318.0	325.7	333.2	340.9	349.2	358.2	367.2	376.2	385.2	391.0
65°	273.6	281.7	289.7	297.8	305.9	314.5	323.7	332.8	342.0	351.1	357.3
67.5°	236.2	244.8	253.4	262.0	270.5	279.6	288.8	298.1	307.4	316.7	323.5
70°	210.1	219.0	227.9	236.8	245.8	255.2	265.2	275.1	285.1	295.1	301.7
72.5°	186.2	195.1	204.0	212.9	221.9	231.5	241.7	252.1	262.3	272.6	279.5
75°	148.5	158.2	168.0	177.7	187.4	197.5	207.9	218.3	228.6	239.1	245.8
77.5°	115.6	125.5	135.3	145.1	154.9	165.1	175.6	186.0	196.4	206.9	214.1
80°	92.5	102.6	112.8	123.0	133.1	143.6	154.4	165.1	175.9	186.7	193.8
82.5°	72.2	82.6	92.9	103.3	113.6	124.2	135.2	146.2	157.1	168.1	175.1
85°	45.7	56.1	66.5	76.9	87.2	97.9	109.0	119.9	130.9	142.0	149.0
87.5°	25.1	35.8	46.6	57.4	68.2	79.2	90.4	101.6	112.7	123.9	131.2
90°	13.2	25.7	38.1	50.6	63.0	76.1	89.6	103.3	116.8	130.4	138.3
92.5°	30.7	39.1	47.7	56.3	64.7	75.3	88.0	100.7	113.4	126.1	134.4
95°	73.5	72.1	70.8	69.5	68.0	73.7	86.5	99.2	111.8	124.6	132.6
97.5°	136.2	139.2	142.3	145.3	148.5	146.5	139.6	132.8	125.9	119.0	127.1
100°	183.5	194.7	206.0	217.2	228.5	220.9	194.6	168.2	141.8	115.4	123.2
102.5°	237.5	246.7	256.0	265.3	274.6	264.3	234.4	204.6	174.8	144.9	145.1
105°	316.2	323.7	331.2	338.8	346.3	344.1	332.3	320.5	308.7	296.9	262.0
107.5°	398.3	404.7	410.9	417.1	423.4	432.4	444.2	455.8	467.6	479.4	455.0
110°	453.2	458.7	464.3	469.8	475.5	483.7	494.5	505.3	516.1	527.0	524.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	506.2	511.0	515.7	520.4	525.1	532.7	543.2	553.8	564.2	574.7	580.1
115°	583.8	587.6	591.6	595.4	599.3	606.0	615.5	625.1	634.6	644.2	651.4
117.5°	659.7	662.9	666.1	669.4	672.6	678.2	686.3	694.4	702.5	710.5	717.3
120°	706.1	709.3	712.4	715.5	718.5	723.9	731.5	739.0	746.5	754.0	760.6
122.5°	754.2	756.4	758.7	760.9	763.2	768.0	775.4	782.7	790.1	797.5	803.4
125°	819.1	821.0	822.9	824.7	826.5	830.9	837.9	844.8	851.8	858.7	863.5
127.5°	883.0	884.6	886.3	887.9	889.5	893.4	899.5	905.5	911.6	917.7	922.6
130°	922.7	924.4	926.0	927.6	929.3	932.6	937.7	942.8	947.9	953.0	957.8
132.5°	960.1	962.0	963.8	965.5	967.3	970.3	974.4	978.4	982.5	986.5	991.2
135°	1018.2	1019.3	1020.6	1021.7	1022.9	1025.0	1028.2	1031.4	1034.7	1037.9	1042.3
137.5°	1067.7	1069.3	1070.9	1072.5	1074.1	1075.8	1077.5	1079.3	1081.1	1082.9	1087.3
140°	1100.1	1101.5	1102.9	1104.3	1105.6	1107.0	1108.3	1109.6	1111.0	1112.2	1116.2
142.5°	1130.8	1132.0	1133.2	1134.4	1135.7	1136.7	1137.5	1138.3	1139.1	1140.0	1143.4
145°	1173.7	1175.1	1176.5	1177.9	1179.3	1180.3	1180.7	1181.2	1181.6	1182.1	1184.2
147.5°	1213.2	1214.2	1215.3	1216.3	1217.4	1218.2	1218.6	1219.1	1219.5	1219.9	1220.9
150°	1238.1	1238.7	1239.4	1240.1	1240.8	1241.4	1241.8	1242.2	1242.8	1243.2	1243.7
152.5°	1260.4	1260.7	1261.1	1261.3	1261.7	1261.9	1262.2	1262.6	1262.8	1263.1	1263.9
155°	1291.9	1291.5	1290.9	1290.5	1290.0	1289.9	1290.1	1290.4	1290.7	1290.8	1292.0
157.5°	1316.3	1316.3	1316.3	1316.2	1316.2	1316.0	1315.8	1315.5	1315.4	1315.1	1316.5
160°	1331.2	1331.1	1330.8	1330.6	1330.3	1330.1	1329.9	1329.6	1329.5	1329.2	1330.6
162.5°	1345.3	1344.8	1344.2	1343.5	1342.9	1342.6	1342.3	1342.1	1341.8	1341.6	1343.2
165°	1362.4	1361.6	1360.9	1360.3	1359.6	1359.1	1358.9	1358.6	1358.4	1358.2	1360.0
167.5°	1375.6	1374.7	1373.8	1372.9	1371.9	1371.5	1371.5	1371.5	1371.5	1371.5	1373.3
170°	1383.0	1382.2	1381.3	1380.3	1379.4	1378.9	1378.9	1378.9	1378.9	1378.9	1380.7
172.5°	1388.0	1387.0	1385.8	1384.7	1383.6	1383.1	1383.3	1383.5	1383.7	1383.8	1385.7
175°	1394.5	1393.3	1392.1	1391.0	1389.8	1389.4	1389.6	1389.8	1390.1	1390.3	1392.0
177.5°	1396.2	1395.2	1394.3	1393.4	1392.4	1392.0	1392.2	1392.4	1392.6	1392.8	1394.3
180°	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1
2.5°	855.3	856.7	857.9	858.5	858.4	858.2	858.0	857.9
5°	853.9	855.6	857.2	857.9	857.7	857.6	857.4	857.1
7.5°	848.7	850.9	852.9	853.8	853.5	853.4	853.1	852.8
10°	843.6	845.6	847.7	848.6	848.1	847.7	847.3	846.9
12.5°	836.5	838.4	840.3	841.1	840.6	840.3	839.8	839.4
15°	823.0	825.1	827.2	828.0	827.9	827.7	827.4	827.2
17.5°	805.4	807.3	809.1	809.9	809.7	809.3	809.0	808.8
20°	792.7	794.6	796.5	797.5	797.7	797.9	798.1	798.3
22.5°	778.7	781.1	783.5	784.6	784.5	784.3	784.3	784.1
25°	755.2	757.9	760.5	761.9	761.9	761.9	761.9	761.9
27.5°	730.5	732.8	735.1	736.4	736.6	736.7	736.9	737.1
30°	713.6	716.1	718.6	719.9	719.9	719.9	719.9	719.9
32.5°	695.3	697.9	700.6	702.2	702.7	703.2	703.6	704.2
35°	668.2	671.4	674.4	676.5	677.3	678.1	678.9	679.8
37.5°	640.1	643.6	647.1	649.3	649.9	650.6	651.2	651.9
40°	621.4	624.9	628.5	630.6	631.5	632.3	633.1	634.0
42.5°	601.9	605.7	609.7	612.2	613.3	614.5	615.6	616.8
45°	572.7	576.7	580.7	583.4	585.1	586.7	588.4	590.1
47.5°	543.3	547.8	552.2	555.1	556.3	557.7	558.9	560.2
50°	523.1	527.8	532.6	535.7	537.2	538.6	540.1	541.5
52.5°	502.5	507.5	512.4	515.8	517.5	519.3	521.1	522.9
55°	471.5	477.2	482.7	486.3	488.0	489.6	491.3	493.0
57.5°	439.9	445.5	451.1	455.0	456.9	458.9	460.7	462.7
60°	417.8	423.6	429.4	433.5	435.7	438.0	440.3	442.6
62.5°	396.9	402.7	408.5	412.4	414.6	416.7	418.8	420.9
65°	363.6	369.7	375.9	380.1	382.2	384.2	386.4	388.4
67.5°	330.3	337.2	343.9	348.2	349.9	351.7	353.5	355.2
70°	308.4	315.0	321.6	325.9	328.1	330.1	332.2	334.3
72.5°	286.2	293.0	299.9	304.3	306.4	308.4	310.5	312.6
75°	252.7	259.6	266.4	271.1	273.6	276.1	278.6	281.1
77.5°	221.3	228.5	235.8	240.3	242.3	244.2	246.1	248.0
80°	200.8	207.9	215.0	219.5	221.6	223.6	225.8	227.8
82.5°	182.2	189.2	196.3	200.8	203.0	205.0	207.1	209.1
85°	156.0	163.1	170.1	174.7	176.7	178.9	180.9	183.0
87.5°	138.4	145.6	152.8	157.6	159.7	161.9	164.1	166.2
90°	146.3	154.3	162.3	167.6	170.0	172.6	175.1	177.6
92.5°	142.8	151.1	159.5	164.8	166.9	169.2	171.3	173.5
95°	140.6	148.6	156.8	161.8	163.9	165.9	168.0	170.0
97.5°	135.1	143.1	151.1	156.3	158.6	161.0	163.3	165.6
100°	131.2	139.0	146.9	151.9	154.3	156.6	158.8	161.1
102.5°	145.2	145.3	145.5	146.8	149.3	151.8	154.3	156.8
105°	227.0	192.1	157.1	140.9	143.2	145.5	147.8	150.2
107.5°	430.7	406.4	382.0	355.4	326.5	297.7	268.8	239.9
110°	522.5	520.4	518.2	501.4	470.2	438.9	407.7	376.4



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CATALOG NUMBER: S123DIP-S775D1195U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	585.5	590.8	596.2	596.3	591.2	586.0	580.9	575.8
115°	658.7	666.0	673.2	678.2	680.8	683.4	686.0	688.5
117.5°	724.1	730.8	737.6	742.0	743.8	745.6	747.3	749.1
120°	767.3	773.9	780.5	784.5	786.0	787.5	788.9	790.3
122.5°	809.3	815.3	821.2	824.9	826.5	828.2	829.8	831.4
125°	868.3	873.2	878.0	881.3	883.2	885.1	887.1	888.9
127.5°	927.4	932.3	937.1	940.0	940.9	941.9	942.8	943.8
130°	962.7	967.5	972.4	975.2	976.0	976.8	977.6	978.4
132.5°	995.9	1000.6	1005.3	1008.0	1008.8	1009.6	1010.3	1011.1
135°	1046.7	1051.1	1055.6	1057.9	1058.3	1058.6	1059.0	1059.4
137.5°	1091.7	1096.1	1100.5	1103.0	1103.5	1104.1	1104.7	1105.3
140°	1120.3	1124.4	1128.4	1130.7	1131.2	1131.8	1132.4	1133.0
142.5°	1147.0	1150.5	1154.0	1155.9	1156.4	1156.7	1157.2	1157.5
145°	1186.3	1188.5	1190.5	1192.0	1192.8	1193.7	1194.5	1195.3
147.5°	1221.9	1222.9	1223.8	1224.1	1223.9	1223.5	1223.2	1222.9
150°	1244.1	1244.6	1245.0	1245.1	1244.8	1244.6	1244.3	1244.0
152.5°	1264.7	1265.6	1266.4	1266.3	1265.3	1264.4	1263.4	1262.4
155°	1293.2	1294.3	1295.5	1295.3	1294.0	1292.6	1291.2	1289.9
157.5°	1317.9	1319.2	1320.6	1320.4	1318.7	1316.8	1315.0	1313.2
160°	1331.9	1333.3	1334.7	1334.6	1333.0	1331.4	1329.7	1328.1
162.5°	1344.8	1346.3	1347.9	1347.9	1346.5	1345.1	1343.6	1342.2
165°	1361.9	1363.7	1365.6	1365.7	1364.1	1362.4	1360.8	1359.2
167.5°	1375.1	1377.0	1378.9	1378.9	1377.0	1375.1	1373.3	1371.5
170°	1382.6	1384.5	1386.3	1386.3	1384.5	1382.6	1380.7	1378.9
172.5°	1387.6	1389.4	1391.2	1391.2	1389.1	1387.1	1385.1	1383.0
175°	1393.6	1395.2	1396.8	1396.6	1394.8	1392.9	1391.2	1389.3
177.5°	1395.7	1397.2	1398.6	1398.5	1396.7	1394.8	1392.9	1391.2
180°	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5

(END OF REPORT)