

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: P332160-935

Luminaire Tested: **S123DIW-S775D755U935-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332160-935
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: S123DIW-S775D755U935-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 755 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5331.3 lumens
Efficiency: N/A
Efficacy: 118.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

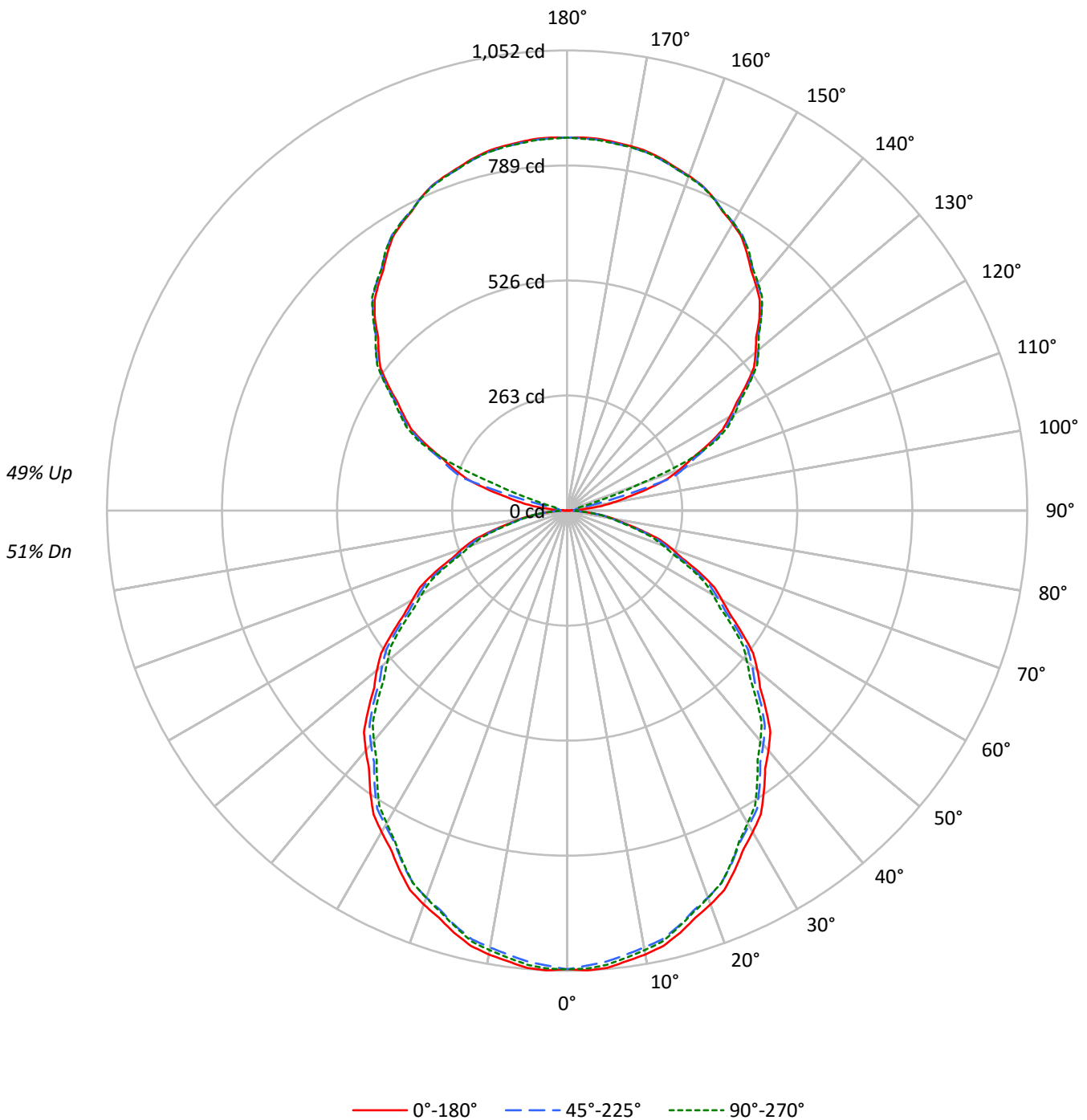
Input Watts (W): 45
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51
1	98	94	90	86	90	87	83	80	74	71	69	62	60	58	50	49	48	43
2	89	82	76	70	82	76	70	66	64	60	57	54	51	49	44	42	41	36
3	81	72	64	59	75	67	60	55	57	52	48	48	44	41	39	37	34	30
4	74	64	56	49	68	59	52	47	50	45	41	43	38	35	35	32	30	26
5	68	57	48	42	63	53	45	40	45	39	35	38	34	30	32	28	26	23
6	63	51	43	37	58	47	40	35	41	35	31	34	30	27	29	25	23	20
7	58	46	38	32	54	43	36	30	37	31	27	31	27	24	26	23	20	18
8	54	42	34	28	50	39	32	27	34	28	24	29	24	21	24	21	18	16
9	50	38	30	25	46	36	29	24	31	25	21	26	22	19	22	19	16	14
10	47	35	28	23	43	33	26	22	28	23	19	24	20	17	21	17	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11286	11286	11286
5°	11339	11182	11261
10°	11262	11086	11154
15°	11131	10961	10981
20°	10977	10781	10791
25°	10772	10568	10546
30°	10544	10331	10253
35°	10307	10081	9950
40°	10058	9805	9653
45°	9785	9552	9319
50°	9512	9239	8982
55°	9154	8916	8646
60°	8792	8540	8269
65°	8474	8130	7875
70°	8003	7660	7320
75°	7311	7049	6750
80°	6595	6316	6261
85°	5780	5570	5348



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.8	1.9
10°-20°	278.9	5.2
20°-30°	411.9	7.7
30°-40°	481.2	9.0
40°-50°	483.8	9.1
50°-60°	425.0	8.0
60°-70°	316.6	5.9
70°-80°	180.4	3.4
80°-90°	54.2	1.0
90°-100°	31.0	0.6
100°-110°	147.8	2.8
110°-120°	355.0	6.7
120°-130°	452.0	8.5
130°-140°	482.9	9.1
140°-150°	451.6	8.5
150°-160°	364.3	6.8
160°-170°	235.1	4.4
170°-180°	81.0	1.5
0°-30°	789.6	14.8
0°-40°	1270.8	23.8
0°-60°	2179.5	40.9
0°-90°	2730.7	51.2
90°-120°	533.7	10.0
90°-150°	1920.2	36.0
90°-180°	2601.0	48.8
0°-180°	5331.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1048	1048	1048	1048	1048	
5°	1049	1045	1035	1043	1042	99
15°	999	995	984	990	985	281
25°	907	901	890	890	888	418
35°	784	779	767	762	757	490
45°	643	639	628	617	612	496
55°	488	486	475	466	461	437
65°	333	328	319	312	309	328
75°	176	172	170	165	162	188
85°	47	45	45	43	43	51
90°	1	7	15	18	19	4
95°	39	14	20	24	24	48
105°	189	192	139	33	28	200
115°	354	358	364	370	373	349
125°	499	504	507	508	509	446
135°	622	625	628	630	628	478
145°	717	722	723	724	724	449
155°	790	789	790	792	789	364
165°	833	831	831	835	831	235
175°	853	850	850	854	850	81
180°	853	853	853	853	853	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5
2.5°	1052.1	1051.5	1050.9	1050.2	1049.6	1048.4	1046.5	1044.8	1043.0	1041.3	1042.8
5°	1049.4	1048.4	1047.4	1046.4	1045.3	1043.8	1041.6	1039.4	1037.2	1034.9	1037.0
7.5°	1039.1	1038.1	1037.1	1036.1	1035.1	1033.5	1031.1	1028.9	1026.6	1024.3	1026.1
10°	1030.4	1029.4	1028.5	1027.4	1026.5	1024.7	1022.0	1019.4	1016.8	1014.3	1016.1
12.5°	1018.9	1018.0	1017.3	1016.4	1015.5	1013.9	1011.5	1009.0	1006.6	1004.1	1005.5
15°	998.9	998.1	997.3	996.5	995.7	994.0	991.4	988.8	986.2	983.6	985.2
17.5°	975.6	974.6	973.5	972.5	971.5	969.7	967.1	964.4	961.8	959.2	960.4
20°	958.3	957.1	956.0	954.8	953.6	951.6	949.0	946.4	943.8	941.2	942.0
22.5°	938.8	937.6	936.4	935.2	934.0	932.1	929.5	927.0	924.4	921.7	922.4
25°	907.0	905.8	904.6	903.4	902.2	900.3	897.6	895.0	892.4	889.8	890.0
27.5°	872.9	871.7	870.6	869.4	868.2	866.3	863.4	860.7	857.8	855.0	855.1
30°	848.3	847.3	846.4	845.3	844.3	842.4	839.6	836.8	834.1	831.2	831.2
32.5°	823.8	822.5	821.1	819.8	818.6	816.8	814.6	812.4	810.3	808.1	807.0
35°	784.4	783.2	782.0	780.8	779.5	777.7	775.0	772.4	769.8	767.2	766.0
37.5°	743.9	742.4	740.9	739.3	737.9	735.8	733.1	730.5	727.8	725.2	723.8
40°	715.8	714.6	713.4	712.2	711.0	709.0	706.2	703.4	700.6	697.8	696.2
42.5°	687.7	686.3	684.9	683.6	682.3	680.2	677.3	674.5	671.8	668.9	667.4
45°	642.8	642.0	641.2	640.4	639.6	637.9	635.2	632.7	630.1	627.5	625.1
47.5°	598.2	597.1	595.9	594.8	593.6	591.8	589.4	586.9	584.4	582.0	579.6
50°	568.0	567.0	565.9	565.0	564.0	562.1	559.6	557.0	554.3	551.7	549.6
52.5°	536.2	535.5	534.9	534.2	533.5	531.8	529.0	526.2	523.5	520.7	518.8
55°	487.8	487.5	487.3	487.2	486.9	485.5	482.9	480.4	477.7	475.1	472.9
57.5°	441.6	440.9	440.2	439.5	438.9	437.5	435.4	433.3	431.2	429.1	427.1
60°	408.4	408.2	408.0	407.8	407.6	406.3	403.9	401.5	399.1	396.7	394.9
62.5°	378.8	378.3	377.8	377.3	376.8	375.3	372.9	370.5	368.1	365.7	363.9
65°	332.7	331.7	330.6	329.7	328.6	327.2	325.1	323.1	321.2	319.2	317.5
67.5°	283.8	282.9	282.1	281.1	280.3	279.1	277.6	276.0	274.5	273.0	271.6
70°	254.3	253.0	251.8	250.6	249.4	248.2	247.0	245.8	244.6	243.4	242.0
72.5°	223.3	222.3	221.4	220.6	219.7	218.6	217.2	215.9	214.5	213.1	211.9
75°	175.8	175.0	174.2	173.4	172.6	171.9	171.3	170.7	170.0	169.5	168.5
77.5°	133.8	133.4	132.9	132.5	132.0	131.5	130.7	130.0	129.3	128.5	127.9
80°	106.4	105.8	105.2	104.6	104.0	103.5	103.1	102.7	102.3	101.9	101.7
82.5°	79.7	79.6	79.5	79.3	79.2	79.1	79.0	79.0	78.9	78.8	78.4
85°	46.8	46.5	46.1	45.7	45.3	45.1	45.1	45.1	45.1	45.1	44.7
87.5°	18.9	18.7	18.5	18.3	18.1	18.1	18.3	18.5	18.7	18.9	18.9
90°	0.6	2.1	3.4	4.8	6.3	7.9	9.7	11.5	13.3	15.2	15.8
92.5°	11.8	11.4	11.0	10.6	10.2	10.7	12.1	13.4	14.8	16.2	17.1
95°	38.7	32.9	27.1	21.4	15.6	13.4	15.0	16.5	18.1	19.6	20.7
97.5°	77.7	75.1	72.5	69.9	67.3	61.0	50.8	40.6	30.6	20.4	21.5
100°	107.1	109.9	112.7	115.5	118.3	108.7	86.8	64.8	42.9	20.9	22.0
102.5°	140.5	142.6	144.6	146.6	148.6	137.7	113.7	89.6	65.7	41.7	38.2
105°	188.8	190.4	191.9	193.5	195.0	189.4	176.8	164.1	151.4	138.8	113.8
107.5°	239.7	241.0	242.2	243.5	244.7	246.3	248.3	250.3	252.4	254.3	236.0
110°	273.7	274.8	276.0	277.1	278.2	279.6	281.1	282.7	284.2	285.8	281.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	306.2	307.1	308.2	309.2	310.2	311.5	313.1	314.6	316.2	317.7	317.8
115°	354.1	355.0	355.9	356.7	357.6	358.6	359.9	361.1	362.4	363.7	365.1
117.5°	400.7	401.7	402.8	403.8	404.8	405.7	406.3	407.0	407.6	408.3	409.4
120°	429.6	430.8	432.1	433.3	434.6	435.5	435.9	436.4	436.8	437.1	438.3
122.5°	459.0	460.0	461.1	462.1	463.1	463.9	464.4	465.0	465.5	466.1	466.8
125°	499.3	500.4	501.5	502.7	503.8	504.6	505.1	505.8	506.3	506.9	507.1
127.5°	538.3	539.4	540.5	541.7	542.8	543.7	544.4	545.0	545.7	546.4	546.8
130°	562.6	563.8	564.9	566.0	567.1	568.0	568.5	569.1	569.6	570.2	570.8
132.5°	585.9	587.0	588.1	589.3	590.5	591.2	591.7	592.1	592.5	593.1	593.6
135°	621.6	622.4	623.2	624.1	624.9	625.6	626.2	626.7	627.3	627.8	628.3
137.5°	651.9	653.0	654.1	655.1	656.3	656.9	657.2	657.5	657.9	658.1	658.8
140°	672.2	673.0	673.9	674.8	675.6	676.2	676.7	677.1	677.5	678.0	678.5
142.5°	691.0	691.8	692.7	693.5	694.4	695.0	695.4	695.9	696.3	696.7	697.2
145°	717.2	718.2	719.2	720.1	721.2	721.8	722.0	722.4	722.6	722.9	723.2
147.5°	741.9	742.5	743.2	743.8	744.5	744.9	745.3	745.5	745.8	746.1	746.4
150°	757.2	757.5	757.9	758.4	758.8	759.1	759.5	759.7	760.0	760.3	760.6
152.5°	770.8	771.0	771.2	771.4	771.6	771.8	772.0	772.1	772.3	772.5	772.9
155°	790.1	789.8	789.5	789.2	788.9	788.8	789.0	789.2	789.3	789.5	790.1
157.5°	805.0	805.0	804.9	804.9	804.9	804.9	804.7	804.5	804.4	804.3	805.1
160°	814.2	814.0	813.9	813.7	813.6	813.5	813.3	813.1	813.0	812.9	813.7
162.5°	822.8	822.4	822.0	821.7	821.3	821.0	820.9	820.8	820.6	820.4	821.5
165°	833.2	832.8	832.3	831.9	831.5	831.2	831.0	830.9	830.8	830.6	831.7
167.5°	841.3	840.7	840.2	839.6	839.0	838.7	838.7	838.7	838.7	838.7	839.8
170°	845.8	845.2	844.7	844.1	843.6	843.3	843.3	843.3	843.3	843.3	844.4
172.5°	848.9	848.2	847.5	846.9	846.2	845.8	846.0	846.1	846.2	846.4	847.5
175°	852.8	852.0	851.4	850.7	850.0	849.7	849.8	850.0	850.2	850.2	851.3
177.5°	853.8	853.3	852.6	852.1	851.5	851.4	851.4	851.5	851.7	851.8	852.6
180°	852.8	852.8	852.8	852.8	852.8	852.8	852.8	852.8	852.8	852.8	852.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5
2.5°	1044.5	1046.1	1047.7	1048.4	1048.3	1048.1	1047.9	1047.8
5°	1039.0	1040.9	1043.0	1043.8	1043.4	1043.0	1042.6	1042.2
7.5°	1027.9	1029.8	1031.6	1032.3	1032.1	1031.8	1031.6	1031.4
10°	1017.9	1019.6	1021.4	1022.2	1021.7	1021.3	1021.0	1020.5
12.5°	1006.8	1008.1	1009.4	1010.0	1009.7	1009.4	1009.3	1009.0
15°	986.8	988.3	990.0	990.2	988.9	987.7	986.6	985.4
17.5°	961.5	962.6	963.7	964.1	963.6	963.2	962.8	962.3
20°	942.8	943.6	944.4	944.5	943.9	943.3	942.7	942.1
22.5°	923.0	923.7	924.3	924.2	923.5	922.7	922.0	921.2
25°	890.2	890.4	890.6	890.4	889.8	889.2	888.6	888.0
27.5°	855.3	855.5	855.7	855.3	854.6	853.9	853.1	852.3
30°	831.2	831.2	831.2	830.5	829.1	827.7	826.3	824.9
32.5°	805.9	804.8	803.7	802.7	801.9	801.2	800.4	799.7
35°	764.8	763.6	762.4	761.3	760.3	759.3	758.3	757.2
37.5°	722.3	720.8	719.5	718.4	717.7	717.1	716.4	715.8
40°	694.6	693.0	691.4	690.2	689.4	688.5	687.8	687.0
42.5°	665.7	664.1	662.5	661.3	660.6	659.7	658.9	658.1
45°	622.7	620.3	617.9	616.1	615.2	614.2	613.1	612.2
47.5°	577.3	575.0	572.6	570.9	570.1	569.2	568.3	567.4
50°	547.3	545.1	542.9	541.2	540.0	538.8	537.6	536.4
52.5°	516.9	515.1	513.2	511.7	510.5	509.3	508.1	506.9
55°	470.7	468.5	466.3	464.7	463.6	462.7	461.7	460.7
57.5°	425.2	423.3	421.3	419.7	418.5	417.4	416.2	415.1
60°	393.0	391.2	389.4	388.1	387.0	386.1	385.0	384.1
62.5°	362.1	360.2	358.4	357.2	356.5	355.9	355.2	354.5
65°	315.9	314.4	312.7	311.6	311.0	310.4	309.8	309.2
67.5°	270.2	268.8	267.3	266.2	265.4	264.6	263.7	262.9
70°	240.6	239.2	237.8	236.6	235.6	234.6	233.6	232.6
72.5°	210.6	209.4	208.2	207.2	206.7	206.2	205.7	205.2
75°	167.5	166.5	165.5	164.7	164.1	163.5	162.9	162.3
77.5°	127.2	126.5	125.8	125.5	125.5	125.5	125.5	125.5
80°	101.5	101.3	101.1	101.0	101.0	101.0	101.0	101.0
82.5°	78.1	77.7	77.3	77.1	77.0	76.8	76.6	76.5
85°	44.3	43.9	43.5	43.3	43.3	43.3	43.3	43.3
87.5°	18.9	18.8	18.7	18.7	18.8	18.9	18.9	18.9
90°	16.4	16.9	17.5	17.9	18.2	18.4	18.7	19.0
92.5°	18.0	18.9	19.8	20.3	20.5	20.7	20.8	21.0
95°	21.6	22.6	23.6	24.1	24.1	24.1	24.1	24.1
97.5°	22.6	23.8	24.9	25.6	25.7	25.8	26.0	26.1
100°	23.2	24.3	25.4	26.1	26.2	26.3	26.4	26.6
102.5°	34.7	31.3	27.7	26.1	26.3	26.6	26.9	27.1
105°	88.9	64.0	39.1	26.8	27.0	27.3	27.6	27.9
107.5°	217.7	199.5	181.2	162.7	143.9	125.1	106.3	87.6
110°	276.5	271.8	267.2	254.8	234.6	214.5	194.3	174.3



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CATALOG NUMBER: S123DIW-S775D755U935-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	317.9	318.0	318.1	315.9	311.7	307.5	303.2	298.9
115°	366.5	367.9	369.3	370.3	370.8	371.4	372.0	372.6
117.5°	410.5	411.6	412.8	413.4	413.5	413.6	413.7	413.9
120°	439.5	440.6	441.7	442.2	442.2	442.2	442.2	442.2
122.5°	467.6	468.4	469.2	469.7	469.8	469.8	470.0	470.1
125°	507.4	507.7	508.0	508.2	508.6	508.9	509.1	509.4
127.5°	547.3	547.8	548.2	548.3	548.0	547.7	547.4	547.2
130°	571.4	571.9	572.5	572.7	572.3	572.0	571.8	571.4
132.5°	594.2	594.7	595.3	595.4	595.0	594.6	594.2	593.7
135°	628.7	629.1	629.6	629.6	629.1	628.7	628.3	627.8
137.5°	659.5	660.2	660.9	661.1	660.8	660.5	660.2	660.0
140°	679.1	679.6	680.2	680.4	680.0	679.8	679.5	679.2
142.5°	697.6	698.0	698.4	698.5	698.1	697.8	697.3	696.9
145°	723.5	723.8	724.0	724.2	724.2	724.2	724.2	724.2
147.5°	746.7	746.9	747.3	747.0	746.4	745.7	745.1	744.4
150°	760.9	761.1	761.4	761.4	761.0	760.5	760.1	759.7
152.5°	773.4	774.0	774.5	774.4	773.8	773.1	772.5	771.8
155°	790.8	791.5	792.3	792.2	791.3	790.5	789.6	788.8
157.5°	806.0	806.8	807.6	807.5	806.4	805.3	804.3	803.1
160°	814.6	815.5	816.2	816.2	815.2	814.2	813.2	812.3
162.5°	822.4	823.4	824.3	824.3	823.5	822.6	821.7	820.9
165°	832.8	834.0	835.1	835.2	834.2	833.2	832.2	831.2
167.5°	840.9	842.1	843.3	843.3	842.1	840.9	839.8	838.7
170°	845.5	846.7	847.8	847.8	846.7	845.5	844.4	843.3
172.5°	848.6	849.7	850.8	850.8	849.5	848.3	847.1	845.8
175°	852.2	853.3	854.2	854.1	853.0	851.9	850.8	849.6
177.5°	853.6	854.5	855.4	855.2	854.1	853.0	851.9	850.8
180°	852.8	852.8	852.8	852.8	852.8	852.8	852.8	852.8

(END OF REPORT)