

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: P332159

Luminaire Tested: **S123DIW-S775D755U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332159
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIW-S775D755U835-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 755 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5850.8 lumens
Efficiency: N/A
Efficacy: 130.0 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: General Diffuse

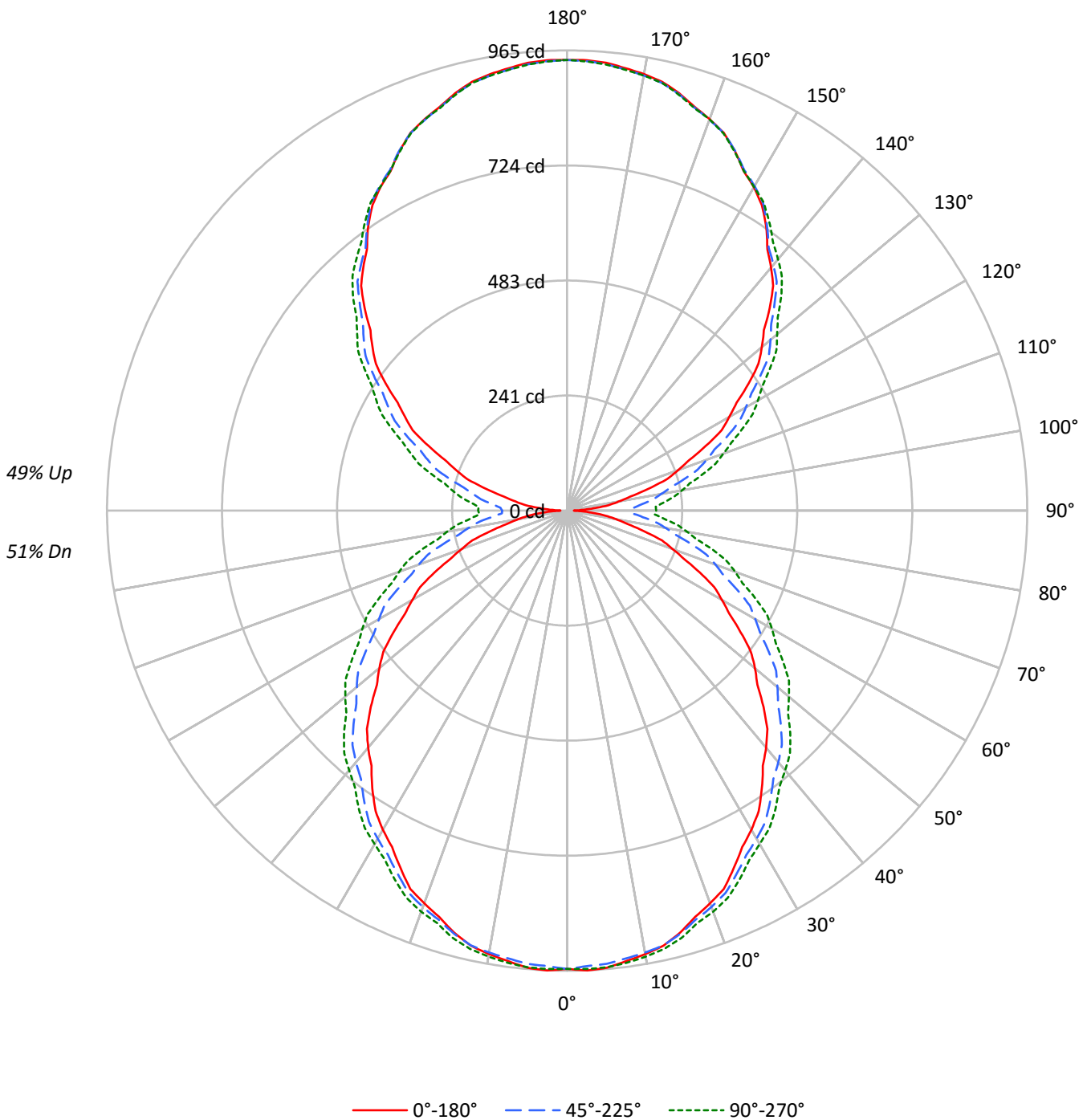
Input Watts (W): 45
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332159

CATALOG NUMBER: S123DIW-S775D755U835-4F0-1E-UDD-D1

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	97	92	88	84	89	85	81	78	72	69	66	60	58	56	48	47	46	40
2	88	80	73	68	81	74	68	63	62	58	54	52	49	46	42	40	38	33
3	80	70	62	56	73	65	58	52	55	49	45	45	42	38	37	34	32	27
4	73	62	53	47	67	57	50	44	48	43	38	40	36	32	33	30	27	23
5	67	55	46	40	61	51	43	38	43	37	33	36	31	28	29	26	23	20
6	61	49	41	35	56	45	38	32	39	33	28	32	28	24	27	23	20	17
7	57	44	36	30	52	41	34	28	35	29	25	29	25	21	24	21	18	15
8	53	40	32	27	48	37	30	25	32	26	22	27	22	19	22	19	16	14
9	49	36	29	24	45	34	27	22	29	24	20	25	20	17	21	17	15	12
10	46	33	26	21	42	31	24	20	27	21	18	23	18	15	19	16	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10346	10346	10346
5°	10379	10086	10092
10°	10286	9853	9804
15°	10153	9590	9490
20°	9963	9288	9146
25°	9730	8942	8782
30°	9490	8630	8415
35°	9221	8300	8121
40°	8965	8000	7807
45°	8682	7712	7556
50°	8400	7427	7278
55°	8091	7135	7030
60°	7790	6839	6774
65°	7480	6524	6470
70°	7013	6169	6159
75°	6425	5763	5842
80°	5749	5363	5479
85°	5117	5090	5269



TEST NUMBER: P332159

CATALOG NUMBER: S123DIW-S775D755U835-4F0-1E-UDD-D1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.1	1.6
10°-20°	259.8	4.4
20°-30°	388.5	6.6
30°-40°	464.0	7.9
40°-50°	485.4	8.3
50°-60°	455.5	7.8
60°-70°	380.5	6.5
70°-80°	272.2	4.7
80°-90°	165.1	2.8
90°-100°	163.4	2.8
100°-110°	259.1	4.4
110°-120°	363.3	6.2
120°-130°	440.7	7.5
130°-140°	476.1	8.1
140°-150°	458.1	7.8
150°-160°	383.4	6.6
160°-170°	255.2	4.4
170°-180°	89.4	1.5
0°-30°	739.4	12.6
0°-40°	1203.3	20.6
0°-60°	2144.3	36.6
0°-90°	2962.1	50.6
90°-120°	785.8	13.4
90°-150°	2160.8	36.9
90°-180°	2889.0	49.4
0°-180°	5850.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	961	961	961	961	961	
5°	962	960	954	962	961	91
15°	916	919	918	928	928	258
25°	827	837	841	854	854	381
35°	712	729	742	757	762	445
45°	582	607	634	653	662	449
55°	444	479	516	543	553	397
65°	307	348	394	424	436	303
75°	166	216	268	301	315	178
85°	51	104	159	193	205	54
90°	14	73	136	173	187	12
95°	55	102	159	193	204	58
105°	175	203	254	282	294	187
115°	321	337	372	397	405	317
125°	465	469	496	514	519	415
135°	601	605	615	630	635	463
145°	728	728	730	738	739	454
155°	832	832	833	835	831	383
165°	906	904	904	908	903	255
175°	943	940	940	944	939	89
180°	945	945	945	945	945	



TEST NUMBER: P332159

CATALOG NUMBER: S123DIW-S775D755U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2
2.5°	965.4	964.8	964.3	963.7	963.2	962.1	960.7	959.2	957.7	956.2	957.7
5°	962.3	961.8	961.3	960.9	960.4	959.5	958.1	956.7	955.3	953.9	955.8
7.5°	952.8	952.9	953.0	953.1	953.2	952.6	951.2	949.9	948.5	947.2	949.5
10°	944.5	944.9	945.4	945.9	946.3	946.0	944.8	943.7	942.5	941.3	943.7
12.5°	934.4	935.1	935.7	936.4	937.0	937.0	936.2	935.4	934.6	933.8	935.9
15°	916.2	916.9	917.6	918.3	919.0	919.2	919.0	918.8	918.5	918.3	920.6
17.5°	893.2	894.6	896.0	897.3	898.7	899.4	899.3	899.2	899.1	899.0	901.1
20°	876.4	877.8	879.2	880.6	882.0	882.9	883.4	883.9	884.3	884.8	886.9
22.5°	858.8	860.2	861.6	863.0	864.4	865.4	866.1	866.7	867.4	868.0	870.7
25°	827.2	829.5	831.8	834.2	836.5	838.0	838.7	839.4	840.1	840.8	843.8
27.5°	795.4	798.0	800.7	803.3	806.0	808.0	809.5	811.0	812.5	814.0	816.6
30°	772.7	775.8	778.8	781.8	784.8	787.3	789.1	791.0	792.9	794.7	797.5
32.5°	747.6	751.0	754.4	757.8	761.2	764.1	766.5	769.0	771.4	773.8	776.8
35°	712.0	715.7	719.5	723.2	726.9	730.3	733.3	736.3	739.4	742.4	745.9
37.5°	674.3	678.5	682.7	686.9	691.1	695.0	698.8	702.5	706.2	709.9	713.9
40°	649.2	653.4	657.6	661.8	665.9	670.4	675.0	679.7	684.3	689.0	692.9
42.5°	621.5	626.7	631.8	636.9	642.0	647.0	651.8	656.7	661.5	666.4	670.7
45°	582.2	587.8	593.3	598.9	604.5	610.2	616.0	621.8	627.7	633.5	637.9
47.5°	540.9	547.3	553.6	559.9	566.2	572.7	579.4	586.0	592.7	599.3	604.3
50°	514.1	520.6	527.1	533.7	540.2	547.0	554.3	561.5	568.7	575.9	581.2
52.5°	485.6	492.5	499.4	506.3	513.2	520.6	528.6	536.5	544.5	552.4	558.0
55°	444.0	451.6	459.3	467.0	474.7	482.7	491.1	499.5	507.8	516.2	522.5
57.5°	403.3	411.3	419.3	427.3	435.4	443.9	453.1	462.3	471.4	480.6	486.9
60°	374.9	383.2	391.6	400.0	408.4	417.3	426.9	436.4	445.9	455.5	462.0
62.5°	348.0	356.6	365.2	373.7	382.3	391.6	401.7	411.8	421.9	432.0	438.5
65°	306.8	315.9	324.9	334.0	343.1	352.7	363.0	373.2	383.5	393.7	400.7
67.5°	264.9	274.5	284.2	293.8	303.4	313.5	323.9	334.3	344.7	355.2	362.8
70°	235.6	245.6	255.6	265.6	275.6	286.2	297.4	308.5	319.7	330.9	338.3
72.5°	208.8	218.8	228.8	238.8	248.8	259.6	271.1	282.7	294.2	305.7	313.4
75°	166.5	177.4	188.4	199.3	210.2	221.5	233.1	244.8	256.4	268.1	275.7
77.5°	129.6	140.7	151.7	162.7	173.7	185.1	196.9	208.6	220.3	232.0	240.1
80°	103.7	115.1	126.5	137.9	149.3	161.0	173.1	185.2	197.3	209.4	217.3
82.5°	81.0	92.6	104.2	115.8	127.4	139.3	151.6	163.9	176.2	188.5	196.4
85°	51.3	62.9	74.6	86.2	97.8	109.8	122.2	134.5	146.8	159.2	167.1
87.5°	28.0	39.9	51.8	63.8	75.7	87.8	100.1	112.4	124.7	137.0	145.0
90°	14.4	27.4	40.5	53.5	66.6	80.1	94.1	108.1	122.1	136.1	144.7
92.5°	30.7	42.1	53.5	65.0	76.4	88.5	101.4	114.3	127.2	140.1	148.4
95°	55.3	65.5	75.8	86.0	96.2	107.7	120.4	133.1	145.9	158.6	166.5
97.5°	88.0	97.1	106.1	115.2	124.2	134.7	146.5	158.4	170.2	182.1	189.8
100°	110.4	118.8	127.2	135.7	144.1	154.1	165.6	177.1	188.7	200.2	207.4
102.5°	136.3	143.5	150.8	158.1	165.4	174.9	186.5	198.1	209.7	221.3	228.4
105°	175.4	181.3	187.2	193.1	199.0	207.7	219.2	230.7	242.2	253.7	260.2
107.5°	219.8	224.8	229.7	234.7	239.6	247.1	257.2	267.3	277.4	287.5	294.3
110°	247.5	252.0	256.5	261.1	265.6	272.7	282.3	291.9	301.6	311.2	317.9



TEST NUMBER: P332159

CATALOG NUMBER: S123DIW-S775D755U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	277.2	280.8	284.5	288.1	291.8	298.1	307.1	316.1	325.1	334.1	340.7
115°	320.7	324.0	327.3	330.5	333.8	339.5	347.5	355.6	363.6	371.7	377.4
117.5°	365.3	367.4	369.4	371.5	373.5	378.3	385.7	393.1	400.6	408.0	413.5
120°	392.4	394.5	396.7	398.8	401.0	405.5	412.3	419.2	426.1	432.9	438.1
122.5°	421.5	422.8	424.1	425.5	426.8	430.9	437.8	444.7	451.5	458.4	463.1
125°	464.8	465.3	465.8	466.3	466.8	470.3	476.7	483.1	489.5	495.9	500.1
127.5°	505.8	506.6	507.4	508.3	509.1	512.1	517.3	522.5	527.8	533.0	536.7
130°	533.1	534.2	535.3	536.4	537.4	540.1	544.2	548.4	552.5	556.7	560.5
132.5°	559.6	560.9	562.1	563.4	564.7	567.0	570.3	573.7	577.1	580.4	583.9
135°	601.1	601.8	602.6	603.4	604.1	605.7	608.1	610.5	612.9	615.3	618.8
137.5°	639.5	640.1	640.7	641.4	642.0	643.3	645.2	647.0	648.9	650.8	653.7
140°	665.4	666.2	667.0	667.8	668.7	669.5	670.4	671.2	672.1	672.9	676.3
142.5°	689.7	690.3	691.0	691.6	692.3	692.8	693.2	693.7	694.1	694.5	697.5
145°	727.7	727.8	727.9	728.0	728.1	728.4	728.9	729.4	729.9	730.4	732.1
147.5°	759.9	760.5	761.1	761.7	762.3	762.8	763.3	763.7	764.2	764.7	765.2
150°	783.1	783.4	783.7	784.1	784.4	784.7	785.0	785.4	785.7	786.0	786.0
152.5°	802.1	802.5	803.0	803.5	803.9	804.2	804.4	804.6	804.8	805.0	805.3
155°	832.1	832.1	832.1	832.1	832.1	832.1	832.3	832.5	832.6	832.8	833.5
157.5°	857.6	857.4	857.2	857.0	856.8	856.8	856.9	857.0	857.2	857.3	858.0
160°	873.6	873.3	873.0	872.6	872.3	872.1	872.1	872.1	872.1	872.1	873.0
162.5°	887.9	887.4	886.9	886.5	886.0	885.9	886.0	886.1	886.3	886.4	887.2
165°	906.3	905.8	905.3	904.8	904.3	904.0	904.0	904.0	904.0	904.0	905.0
167.5°	921.0	920.3	919.7	919.0	918.3	918.1	918.2	918.3	918.5	918.6	919.6
170°	929.3	928.6	928.0	927.3	926.6	926.3	926.3	926.3	926.3	926.3	927.5
172.5°	935.8	935.2	934.5	933.8	933.2	932.8	932.8	932.8	932.8	932.8	933.9
175°	942.6	942.0	941.3	940.7	940.0	939.7	939.7	939.7	939.7	939.7	940.7
177.5°	945.5	944.9	944.4	943.9	943.4	943.1	943.1	943.1	943.1	943.1	943.9
180°	944.9	944.9	944.9	944.9	944.9	944.9	944.9	944.9	944.9	944.9	944.9



TEST NUMBER: P332159

CATALOG NUMBER: S123DIW-S775D755U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2
2.5°	959.2	960.7	962.1	962.8	962.6	962.4	962.2	962.1
5°	957.6	959.5	961.3	962.1	961.9	961.7	961.5	961.2
7.5°	951.8	954.2	956.5	957.5	957.2	957.0	956.7	956.4
10°	946.0	948.3	950.6	951.6	951.1	950.6	950.2	949.7
12.5°	938.1	940.2	942.3	943.2	942.7	942.3	941.8	941.3
15°	922.9	925.3	927.6	928.6	928.4	928.2	927.9	927.7
17.5°	903.2	905.3	907.4	908.3	908.0	907.6	907.3	907.0
20°	889.0	891.1	893.2	894.3	894.6	894.8	895.0	895.3
22.5°	873.3	876.0	878.6	879.9	879.8	879.6	879.5	879.3
25°	846.9	849.9	852.9	854.4	854.4	854.4	854.4	854.4
27.5°	819.2	821.8	824.4	825.8	826.0	826.2	826.4	826.6
30°	800.3	803.1	805.9	807.3	807.3	807.3	807.3	807.3
32.5°	779.7	782.7	785.7	787.5	788.0	788.6	789.1	789.7
35°	749.4	752.9	756.3	758.6	759.5	760.4	761.3	762.3
37.5°	717.8	721.8	725.7	728.1	728.8	729.6	730.3	731.1
40°	696.9	700.8	704.8	707.2	708.2	709.1	710.0	711.0
42.5°	675.0	679.3	683.7	686.5	687.8	689.1	690.4	691.7
45°	642.3	646.7	651.2	654.3	656.2	658.0	659.9	661.8
47.5°	609.3	614.3	619.3	622.5	623.9	625.4	626.8	628.2
50°	586.6	591.9	597.3	600.8	602.4	604.0	605.7	607.3
52.5°	563.5	569.1	574.6	578.4	580.4	582.4	584.4	586.4
55°	528.8	535.1	541.3	545.4	547.3	549.1	551.0	552.9
57.5°	493.3	499.6	505.9	510.2	512.4	514.6	516.7	518.9
60°	468.5	475.0	481.5	486.1	488.6	491.2	493.8	496.3
62.5°	445.1	451.6	458.1	462.5	464.9	467.3	469.7	472.0
65°	407.7	414.6	421.6	426.3	428.6	430.9	433.3	435.6
67.5°	370.4	378.1	385.7	390.5	392.4	394.4	396.4	398.3
70°	345.8	353.2	360.7	365.5	367.9	370.2	372.5	374.9
72.5°	321.0	328.6	336.3	341.3	343.6	345.9	348.2	350.6
75°	283.4	291.1	298.8	304.0	306.8	309.6	312.4	315.2
77.5°	248.2	256.3	264.4	269.5	271.7	273.8	276.0	278.1
80°	225.2	233.1	241.1	246.2	248.5	250.8	253.2	255.5
82.5°	204.3	212.2	220.1	225.2	227.6	229.9	232.2	234.5
85°	175.0	182.9	190.8	195.9	198.2	200.6	202.9	205.2
87.5°	153.0	161.1	169.1	174.4	176.7	179.1	181.5	183.9
90°	153.3	161.8	170.4	176.0	178.7	181.3	184.0	186.7
92.5°	156.6	164.9	173.1	178.2	180.2	182.1	184.1	186.0
95°	174.3	182.2	190.1	195.2	197.5	199.8	202.2	204.5
97.5°	197.5	205.2	212.8	217.8	220.1	222.3	224.6	226.9
100°	214.7	221.9	229.2	234.1	236.8	239.4	242.1	244.8
102.5°	235.4	242.5	249.5	254.2	256.5	258.7	261.0	263.2
105°	266.7	273.2	279.8	284.2	286.7	289.1	291.5	293.9
107.5°	301.0	307.8	314.5	318.9	320.7	322.6	324.4	326.3
110°	324.6	331.3	338.0	342.2	343.7	345.2	346.8	348.3



TEST NUMBER: P332159

CATALOG NUMBER: S123DIW-S775D755U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	347.4	354.1	360.7	365.0	367.0	369.0	371.0	373.0
115°	383.2	388.9	394.7	398.4	400.1	401.8	403.5	405.2
117.5°	419.0	424.5	430.0	433.5	434.8	436.2	437.5	438.9
120°	443.3	448.5	453.7	456.9	458.2	459.5	460.8	462.1
122.5°	467.9	472.6	477.4	480.3	481.5	482.6	483.8	485.0
125°	504.4	508.6	512.8	515.4	516.4	517.4	518.3	519.3
127.5°	540.4	544.0	547.7	550.0	550.8	551.6	552.4	553.3
130°	564.2	568.0	571.8	573.8	574.0	574.2	574.5	574.7
132.5°	587.3	590.8	594.2	596.3	597.0	597.6	598.3	599.0
135°	622.3	625.9	629.4	631.6	632.4	633.2	634.1	634.9
137.5°	656.7	659.7	662.7	664.5	665.0	665.5	666.1	666.6
140°	679.6	682.9	686.2	687.9	687.9	687.9	687.9	688.0
142.5°	700.4	703.4	706.3	708.0	708.2	708.5	708.8	709.1
145°	733.8	735.5	737.2	738.1	738.4	738.7	738.9	739.2
147.5°	765.8	766.3	766.9	767.1	766.9	766.8	766.6	766.5
150°	786.0	786.0	786.0	785.8	785.2	784.7	784.2	783.7
152.5°	805.6	805.8	806.1	805.8	805.1	804.3	803.5	802.8
155°	834.1	834.8	835.4	835.2	834.0	832.9	831.7	830.6
157.5°	858.7	859.4	860.1	859.9	859.0	858.1	857.2	856.2
160°	873.8	874.6	875.4	875.5	874.9	874.2	873.5	872.9
162.5°	888.0	888.9	889.7	889.6	888.5	887.5	886.4	885.3
165°	906.0	907.0	908.0	907.9	906.8	905.6	904.5	903.3
167.5°	920.6	921.7	922.7	922.7	921.7	920.6	919.6	918.6
170°	928.6	929.8	930.9	930.9	929.8	928.6	927.5	926.3
172.5°	934.9	935.9	936.9	936.9	935.7	934.6	933.4	932.3
175°	941.7	942.6	943.6	943.6	942.4	941.2	940.1	938.9
177.5°	944.7	945.5	946.3	946.2	945.3	944.3	943.4	942.5
180°	944.9	944.9	944.9	944.9	944.9	944.9	944.9	944.9

(END OF REPORT)