

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: P332128

Luminaire Tested: **S123DIW-S560D755U835-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332128
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-S560D755U835-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 755 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5386.3 lumens
Efficiency: N/A
Efficacy: 143.3 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

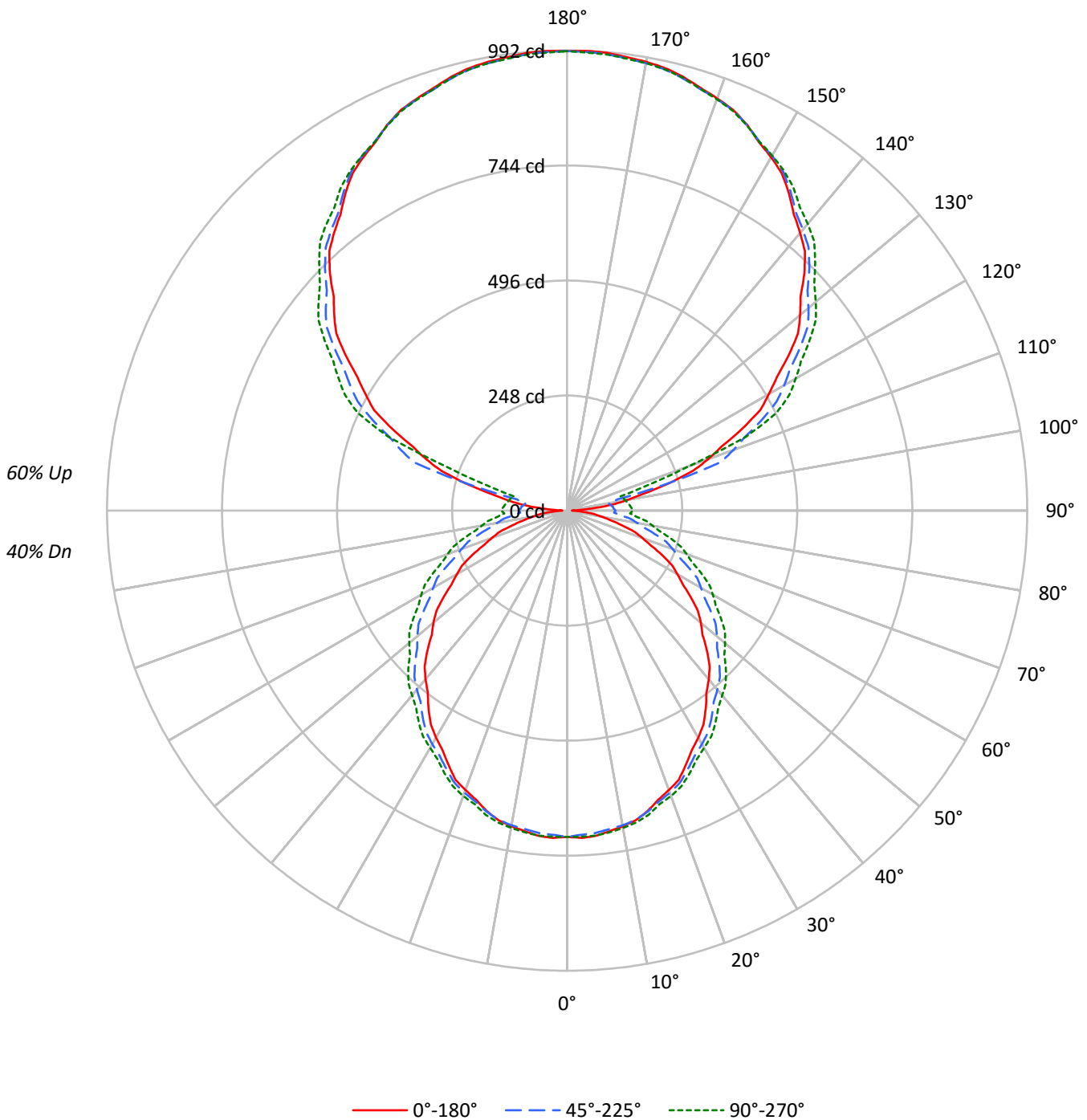
Input Watts (W): 37.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332128

CATALOG NUMBER: S123DIW-S560D755U835-4F0-1E-UDD-D

Luminous Intensity Polar Plot





TEST NUMBER: P332128

CATALOG NUMBER: S123DIW-S560D755U835-4F0-1E-UDD-D

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	78	78	78	62	62	62	47	47	47	40
1	95	90	86	82	86	82	78	75	67	64	62	53	51	50	40	39	38	32
2	86	78	72	66	78	71	66	61	58	54	51	46	43	41	35	33	31	26
3	78	68	61	55	71	62	56	51	51	46	42	40	37	34	31	28	26	22
4	71	60	52	46	64	55	48	43	45	40	36	36	32	29	27	25	22	19
5	65	54	45	39	59	49	42	36	40	35	31	32	28	25	24	22	19	16
6	60	48	40	34	54	44	37	31	36	31	26	29	25	22	22	19	17	14
7	55	43	35	30	50	39	32	27	33	27	23	26	22	19	20	17	15	12
8	51	39	31	26	47	36	29	24	30	24	20	24	20	17	18	16	13	11
9	48	36	28	23	43	33	26	21	27	22	18	22	18	15	17	14	12	10
10	45	33	25	20	40	30	23	19	25	20	16	20	16	14	16	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7569	7569	7569
5°	7593	7378	7383
10°	7525	7209	7173
15°	7428	7016	6943
20°	7289	6795	6690
25°	7119	6541	6425
30°	6943	6313	6156
35°	6746	6072	5942
40°	6558	5852	5711
45°	6351	5641	5527
50°	6145	5433	5325
55°	5919	5219	5143
60°	5697	5003	4956
65°	5471	4772	4733
70°	5132	4514	4504
75°	4700	4216	4274
80°	4202	3924	4008
85°	3741	3722	3854



TEST NUMBER: P332128

CATALOG NUMBER: S123DIW-S560D755U835-4F0-1E-UDD-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.7	1.2
10°-20°	190.0	3.5
20°-30°	284.2	5.3
30°-40°	339.4	6.3
40°-50°	355.1	6.6
50°-60°	333.2	6.2
60°-70°	278.3	5.2
70°-80°	199.1	3.7
80°-90°	121.5	2.3
90°-100°	110.5	2.1
100°-110°	226.4	4.2
110°-120°	448.8	8.3
120°-130°	545.8	10.1
130°-140°	570.3	10.6
140°-150°	526.5	9.8
150°-160°	423.1	7.9
160°-170°	273.1	5.1
170°-180°	94.1	1.7
0°-30°	540.9	10.0
0°-40°	880.3	16.3
0°-60°	1568.7	29.1
0°-90°	2167.7	40.2
90°-120°	785.7	14.6
90°-150°	2428.3	45.1
90°-180°	3219.0	59.8
0°-180°	5386.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	703	703	703	703	703	
5°	704	702	698	704	703	67
15°	670	672	672	679	679	189
25°	605	613	615	625	625	279
35°	521	533	543	554	558	326
45°	426	444	463	478	484	328
55°	325	350	378	398	404	291
65°	224	255	288	310	319	222
75°	122	158	196	220	231	130
85°	38	76	116	141	150	39
90°	11	56	104	132	142	9
95°	53	56	99	126	135	62
105°	225	249	219	116	118	239
115°	415	430	463	488	498	410
125°	582	589	613	630	638	520
135°	723	728	738	754	756	557
145°	834	838	840	847	850	522
155°	918	916	917	920	916	423
165°	968	966	965	970	965	273
175°	990	987	988	992	987	94
180°	990	990	990	990	990	



TEST NUMBER: P332128

CATALOG NUMBER: S123DIW-S560D755U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	703.2	703.2	703.2	703.2	703.2	703.2	703.2	703.2	703.2	703.2	703.2
2.5°	706.3	705.9	705.5	705.0	704.6	703.9	702.8	701.7	700.6	699.5	700.6
5°	704.0	703.6	703.3	703.0	702.6	701.9	700.9	699.9	698.9	697.8	699.2
7.5°	697.1	697.1	697.2	697.3	697.4	696.9	695.9	694.9	693.9	692.9	694.6
10°	691.0	691.3	691.6	692.0	692.3	692.1	691.2	690.4	689.5	688.7	690.4
12.5°	683.6	684.1	684.6	685.0	685.5	685.5	684.9	684.3	683.7	683.1	684.7
15°	670.3	670.8	671.3	671.8	672.3	672.5	672.3	672.1	672.0	671.8	673.5
17.5°	653.4	654.4	655.5	656.5	657.5	658.0	657.9	657.8	657.8	657.7	659.2
20°	641.2	642.2	643.2	644.2	645.2	645.9	646.3	646.6	646.9	647.3	648.8
22.5°	628.3	629.3	630.3	631.4	632.4	633.1	633.6	634.1	634.6	635.0	637.0
25°	605.2	606.9	608.6	610.3	612.0	613.1	613.6	614.1	614.6	615.1	617.3
27.5°	581.9	583.8	585.8	587.7	589.6	591.1	592.2	593.3	594.4	595.5	597.4
30°	565.3	567.5	569.7	572.0	574.2	576.0	577.3	578.7	580.0	581.4	583.5
32.5°	546.9	549.4	551.9	554.4	556.9	559.0	560.8	562.5	564.3	566.1	568.3
35°	520.9	523.6	526.3	529.1	531.8	534.3	536.5	538.7	540.9	543.1	545.7
37.5°	493.3	496.4	499.4	502.5	505.6	508.5	511.2	513.9	516.6	519.4	522.3
40°	474.9	478.0	481.1	484.1	487.2	490.4	493.8	497.2	500.6	504.0	506.9
42.5°	454.7	458.5	462.2	465.9	469.7	473.3	476.9	480.4	484.0	487.5	490.7
45°	425.9	430.0	434.1	438.2	442.2	446.4	450.7	454.9	459.2	463.4	466.7
47.5°	395.7	400.4	405.0	409.6	414.2	419.0	423.9	428.7	433.6	438.5	442.1
50°	376.1	380.9	385.6	390.4	395.2	400.2	405.5	410.8	416.0	421.3	425.2
52.5°	355.3	360.3	365.4	370.4	375.4	380.9	386.7	392.5	398.3	404.2	408.2
55°	324.8	330.4	336.0	341.6	347.3	353.1	359.3	365.4	371.5	377.6	382.2
57.5°	295.1	300.9	306.8	312.6	318.5	324.8	331.5	338.2	344.9	351.6	356.2
60°	274.2	280.4	286.5	292.6	298.7	305.3	312.3	319.3	326.2	333.2	338.0
62.5°	254.6	260.9	267.2	273.4	279.7	286.5	293.9	301.3	308.7	316.1	320.8
65°	224.4	231.1	237.7	244.4	251.0	258.1	265.6	273.0	280.5	288.0	293.1
67.5°	193.8	200.9	207.9	214.9	222.0	229.3	237.0	244.6	252.2	259.8	265.4
70°	172.4	179.7	187.0	194.3	201.6	209.4	217.5	225.7	233.9	242.1	247.5
72.5°	152.7	160.1	167.4	174.7	182.0	189.9	198.3	206.8	215.2	223.7	229.3
75°	121.8	129.8	137.8	145.8	153.8	162.1	170.6	179.1	187.6	196.1	201.7
77.5°	94.8	102.9	111.0	119.0	127.1	135.4	144.0	152.6	161.2	169.8	175.7
80°	75.8	84.2	92.5	100.9	109.2	117.8	126.6	135.5	144.4	153.2	159.0
82.5°	59.3	67.8	76.2	84.7	93.2	101.9	110.9	119.9	128.9	137.9	143.7
85°	37.5	46.0	54.6	63.1	71.6	80.3	89.4	98.4	107.4	116.4	122.2
87.5°	20.5	29.3	38.1	46.9	55.7	64.7	73.8	82.9	92.0	101.1	107.0
90°	10.7	20.7	30.6	40.6	50.6	61.0	71.8	82.6	93.4	104.2	110.7
92.5°	23.0	30.1	37.2	44.2	51.3	59.9	70.1	80.2	90.3	100.5	107.2
95°	53.3	53.2	53.2	53.1	53.1	58.1	68.2	78.4	88.5	98.6	105.1
97.5°	97.7	100.7	103.7	106.7	109.7	109.2	105.4	101.6	97.8	94.0	100.4
100°	131.3	140.0	148.7	157.4	166.1	161.6	144.0	126.3	108.6	90.9	97.2
102.5°	169.5	176.8	184.0	191.3	198.5	192.1	171.9	151.7	131.6	111.4	112.1
105°	225.4	231.3	237.2	243.1	249.0	248.2	240.8	233.4	226.0	218.6	194.4
107.5°	283.7	288.6	293.5	298.4	303.3	310.4	319.7	328.9	338.2	347.5	330.8
110°	322.5	326.9	331.2	335.6	340.0	346.5	355.1	363.7	372.3	380.9	379.9



TEST NUMBER: P332128

CATALOG NUMBER: S123DIW-S560D755U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	360.2	363.9	367.6	371.3	375.0	381.0	389.3	397.6	406.0	414.3	418.7
115°	415.2	418.2	421.2	424.2	427.3	432.6	440.2	447.8	455.4	463.0	468.7
117.5°	469.0	471.5	474.0	476.4	478.9	483.4	489.9	496.4	502.9	509.4	514.8
120°	502.0	504.3	506.6	508.9	511.3	515.5	521.6	527.7	533.8	539.9	545.1
122.5°	536.1	537.8	539.4	541.1	542.7	546.5	552.5	558.5	564.4	570.4	575.1
125°	582.2	583.5	584.8	586.1	587.4	590.8	596.4	602.0	607.6	613.2	617.1
127.5°	627.5	628.6	629.8	630.9	632.0	635.0	639.9	644.8	649.7	654.5	658.4
130°	655.7	656.9	658.0	659.2	660.3	662.9	667.0	671.0	675.1	679.1	683.0
132.5°	682.2	683.5	684.8	686.0	687.3	689.6	692.8	696.1	699.3	702.6	706.3
135°	723.4	724.2	725.0	725.8	726.7	728.3	730.8	733.4	735.9	738.4	742.0
137.5°	758.6	759.7	760.8	761.9	763.0	764.3	765.7	767.1	768.5	769.9	773.4
140°	781.5	782.5	783.5	784.5	785.4	786.4	787.4	788.4	789.4	790.4	793.6
142.5°	803.3	804.1	805.0	805.8	806.7	807.4	808.0	808.6	809.2	809.8	812.6
145°	833.8	834.7	835.7	836.7	837.7	838.3	838.6	839.0	839.3	839.6	841.3
147.5°	861.7	862.4	863.2	863.9	864.7	865.2	865.6	865.9	866.2	866.5	867.3
150°	879.4	879.8	880.3	880.8	881.3	881.7	882.1	882.4	882.7	883.0	883.4
152.5°	895.2	895.5	895.7	895.9	896.2	896.4	896.6	896.8	897.0	897.2	897.7
155°	917.6	917.3	917.0	916.6	916.3	916.2	916.4	916.6	916.7	916.9	917.7
157.5°	935.0	935.0	934.9	934.9	934.9	934.8	934.6	934.4	934.3	934.1	935.1
160°	945.6	945.4	945.3	945.1	944.9	944.8	944.6	944.4	944.3	944.1	945.1
162.5°	955.6	955.2	954.7	954.3	953.9	953.6	953.4	953.3	953.1	952.9	954.1
165°	967.7	967.2	966.7	966.2	965.7	965.4	965.2	965.0	964.9	964.7	966.0
167.5°	977.1	976.4	975.8	975.1	974.5	974.1	974.1	974.1	974.1	974.1	975.4
170°	982.4	981.7	981.1	980.4	979.8	979.4	979.4	979.4	979.4	979.4	980.7
172.5°	985.9	985.1	984.3	983.6	982.8	982.4	982.6	982.7	982.8	983.0	984.3
175°	990.5	989.6	988.8	988.0	987.2	986.9	987.0	987.2	987.4	987.5	988.7
177.5°	991.6	991.0	990.3	989.7	989.0	988.8	988.9	989.0	989.2	989.3	990.3
180°	990.5	990.5	990.5	990.5	990.5	990.5	990.5	990.5	990.5	990.5	990.5



TEST NUMBER: P332128

CATALOG NUMBER: S123DIW-S560D755U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	703.2	703.2	703.2	703.2	703.2	703.2	703.2	703.2
2.5°	701.7	702.8	703.9	704.4	704.2	704.1	704.0	703.8
5°	700.6	701.9	703.3	703.9	703.7	703.5	703.4	703.2
7.5°	696.3	698.0	699.8	700.5	700.3	700.1	699.9	699.7
10°	692.1	693.8	695.5	696.1	695.8	695.5	695.1	694.8
12.5°	686.3	687.8	689.4	690.0	689.7	689.3	689.0	688.7
15°	675.2	676.9	678.6	679.4	679.2	679.0	678.9	678.7
17.5°	660.8	662.3	663.8	664.5	664.2	664.0	663.8	663.5
20°	650.4	651.9	653.4	654.3	654.4	654.6	654.8	654.9
22.5°	638.9	640.9	642.8	643.7	643.6	643.5	643.4	643.3
25°	619.5	621.8	624.0	625.1	625.1	625.1	625.1	625.1
27.5°	599.3	601.2	603.1	604.2	604.3	604.4	604.6	604.7
30°	585.5	587.5	589.6	590.6	590.6	590.6	590.6	590.6
32.5°	570.4	572.6	574.8	576.1	576.5	576.9	577.3	577.7
35°	548.2	550.8	553.3	554.9	555.6	556.3	557.0	557.7
37.5°	525.1	528.0	530.9	532.7	533.2	533.7	534.3	534.8
40°	509.8	512.7	515.6	517.4	518.1	518.8	519.4	520.1
42.5°	493.8	497.0	500.2	502.2	503.2	504.1	505.1	506.0
45°	469.9	473.1	476.4	478.7	480.0	481.4	482.8	484.1
47.5°	445.8	449.4	453.0	455.4	456.4	457.5	458.6	459.6
50°	429.1	433.1	437.0	439.5	440.7	441.9	443.1	444.3
52.5°	412.3	416.3	420.4	423.1	424.6	426.0	427.5	429.0
55°	386.8	391.4	396.0	399.0	400.4	401.7	403.1	404.5
57.5°	360.9	365.5	370.1	373.2	374.8	376.4	378.0	379.6
60°	342.8	347.5	352.3	355.6	357.5	359.3	361.2	363.1
62.5°	325.6	330.4	335.1	338.4	340.1	341.8	343.6	345.3
65°	298.2	303.3	308.5	311.9	313.6	315.3	317.0	318.7
67.5°	271.0	276.6	282.2	285.7	287.1	288.5	290.0	291.4
70°	253.0	258.4	263.9	267.4	269.1	270.8	272.5	274.2
72.5°	234.8	240.4	246.0	249.7	251.4	253.1	254.8	256.5
75°	207.3	213.0	218.6	222.4	224.4	226.5	228.5	230.6
77.5°	181.6	187.5	193.4	197.2	198.8	200.3	201.9	203.5
80°	164.8	170.6	176.4	180.1	181.8	183.5	185.2	186.9
82.5°	149.5	155.2	161.0	164.8	166.5	168.2	169.9	171.6
85°	128.0	133.8	139.6	143.3	145.0	146.7	148.4	150.1
87.5°	113.0	118.9	124.8	128.6	130.4	132.2	133.9	135.7
90°	117.1	123.5	130.0	134.2	136.3	138.3	140.3	142.3
92.5°	113.9	120.6	127.3	131.5	133.3	135.0	136.8	138.6
95°	111.5	117.9	124.3	128.4	130.1	131.8	133.5	135.2
97.5°	106.8	113.2	119.5	123.7	125.5	127.4	129.3	131.1
100°	103.4	109.7	115.9	120.0	121.8	123.7	125.6	127.4
102.5°	112.9	113.6	114.4	115.7	117.7	119.7	121.7	123.7
105°	170.2	146.1	121.9	110.7	112.6	114.5	116.3	118.2
107.5°	314.1	297.5	280.8	262.3	242.0	221.7	201.4	181.1
110°	379.0	378.0	377.0	365.5	343.5	321.5	299.5	277.4



TEST NUMBER: P332128

CATALOG NUMBER: S123DIW-S560D755U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	423.1	427.5	431.9	432.3	428.9	425.5	422.0	418.6
115°	474.4	480.1	485.9	489.7	491.7	493.8	495.8	497.8
117.5°	520.1	525.5	530.9	534.3	535.7	537.2	538.6	540.1
120°	550.4	555.6	560.8	564.0	565.2	566.4	567.6	568.8
122.5°	579.8	584.5	589.2	592.2	593.5	594.8	596.2	597.5
125°	621.0	624.9	628.8	631.5	633.0	634.6	636.1	637.6
127.5°	662.3	666.2	670.1	672.5	673.3	674.1	675.0	675.8
130°	686.9	690.8	694.7	697.0	697.7	698.4	699.1	699.7
132.5°	710.1	713.8	717.6	719.8	720.5	721.2	721.9	722.6
135°	745.5	749.1	752.6	754.6	755.0	755.3	755.7	756.0
137.5°	776.9	780.4	783.8	785.8	786.3	786.9	787.4	787.9
140°	796.8	800.1	803.3	805.1	805.7	806.2	806.7	807.2
142.5°	815.4	818.2	821.0	822.6	823.0	823.4	823.8	824.2
145°	843.0	844.7	846.4	847.6	848.2	848.9	849.6	850.3
147.5°	868.0	868.8	869.5	869.8	869.6	869.5	869.4	869.2
150°	883.7	884.0	884.3	884.4	884.3	884.1	884.0	883.8
152.5°	898.3	898.9	899.5	899.5	898.8	898.1	897.4	896.7
155°	918.5	919.3	920.2	920.1	919.1	918.1	917.1	916.1
157.5°	936.1	937.0	938.0	937.9	936.6	935.3	934.1	932.8
160°	946.1	947.1	948.0	948.0	946.8	945.7	944.5	943.4
162.5°	955.2	956.3	957.4	957.4	956.4	955.4	954.4	953.4
165°	967.3	968.6	969.9	970.0	968.9	967.7	966.6	965.4
167.5°	976.7	978.1	979.4	979.4	978.1	976.7	975.4	974.1
170°	982.0	983.4	984.7	984.7	983.4	982.0	980.7	979.4
172.5°	985.6	986.9	988.2	988.1	986.7	985.3	983.8	982.4
175°	989.8	991.0	992.1	992.0	990.7	989.4	988.1	986.8
177.5°	991.4	992.4	993.5	993.3	992.0	990.7	989.4	988.1
180°	990.5	990.5	990.5	990.5	990.5	990.5	990.5	990.5

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