

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: P332129

Luminaire Tested: **S123DIW-S560D755U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332129
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-S560D755U835-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 560 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: 4983.8 lumens
Efficiency: N/A
Efficacy: 132.5 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

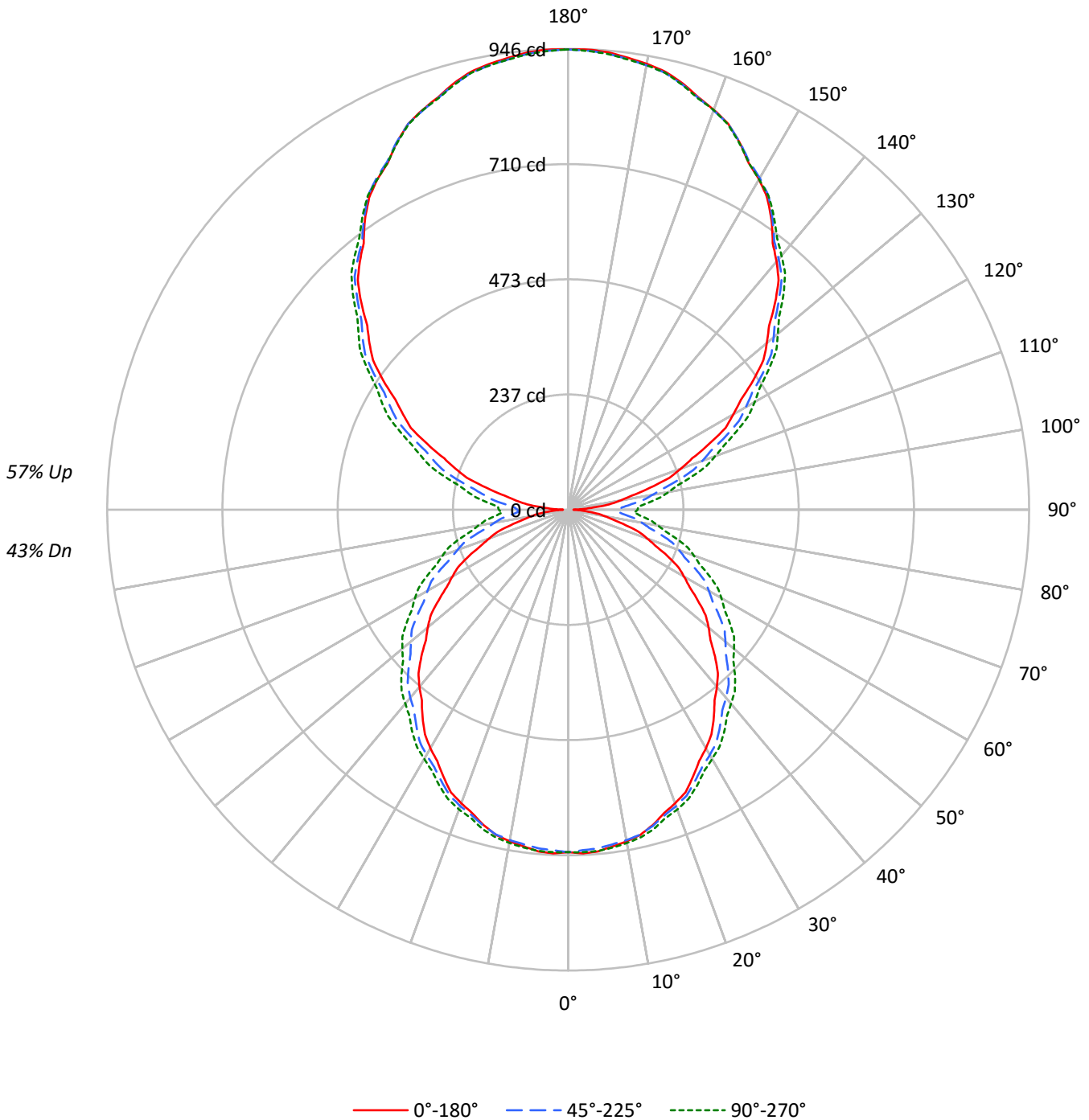
Input Watts (W): 37.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332129

CATALOG NUMBER: S123DIW-S560D755U835-4F0-1E-UDD-D1

Luminous Intensity Polar Plot





TEST NUMBER: P332129

CATALOG NUMBER: S123DIW-S560D755U835-4F0-1E-UDD-D1

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	106	106	106	106	97	97	97	97	80	80	80	64	64	64	50	50	50	43
1	95	91	86	83	87	83	79	76	68	66	63	55	53	52	43	42	40	35
2	86	79	72	67	79	72	66	62	59	55	52	48	45	42	37	35	33	28
3	79	69	61	55	71	63	56	51	52	47	43	42	38	35	33	30	28	24
4	72	61	53	46	65	56	49	43	46	41	36	37	33	30	29	26	24	20
5	66	54	46	39	60	49	42	37	41	36	31	33	29	26	26	23	21	17
6	60	48	40	34	55	44	37	32	37	31	27	30	26	23	24	20	18	15
7	56	43	35	30	51	40	33	28	33	28	24	27	23	20	21	18	16	13
8	52	39	32	26	47	36	29	24	30	25	21	25	21	18	20	17	14	12
9	48	36	28	23	44	33	26	22	28	22	19	23	19	16	18	15	13	11
10	45	33	26	21	41	30	24	19	26	20	17	21	17	14	17	14	12	10

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: P332129

CATALOG NUMBER: S123DIW-S560D755U835-4F0-1E-UDD-D1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.7	1.3
10°-20°	190.0	3.8
20°-30°	284.2	5.7
30°-40°	339.4	6.8
40°-50°	355.1	7.1
50°-60°	333.2	6.7
60°-70°	278.3	5.6
70°-80°	199.1	4.0
80°-90°	121.5	2.4
90°-100°	136.1	2.7
100°-110°	239.0	4.8
110°-120°	349.9	7.0
120°-130°	433.1	8.7
130°-140°	472.6	9.5
140°-150°	457.4	9.2
150°-160°	383.4	7.7
160°-170°	255.2	5.1
170°-180°	89.4	1.8
0°-30°	540.9	10.9
0°-40°	880.3	17.7
0°-60°	1568.7	31.5
0°-90°	2167.7	43.5
90°-120°	725.0	14.5
90°-150°	2088.1	41.9
90°-180°	2816.0	56.5
0°-180°	4983.8	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°	52	88	131	156	165	56
105°	173	194	233	253	262	185
115°	319	332	357	375	381	316
125°	464	467	487	499	502	414
135°	600	604	612	622	625	463
145°	727	728	730	736	736	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: P332129

CATALOG NUMBER: S123DIW-S560D755U835-4F0-1E-UDD-D1

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	55.8	64.7	73.8	82.9	92.0	101.2	107.1
90°	10.7	20.7	30.7	40.7	50.7	61.1	71.9	82.7	93.5	104.4	110.8
92.5°	27.3	36.0	44.6	53.2	61.9	71.1	80.9	90.6	100.4	110.2	116.3
95°	52.2	60.0	67.8	75.6	83.4	92.1	101.8	111.4	121.1	130.8	136.7
97.5°	85.3	92.1	99.0	105.8	112.7	120.6	129.5	138.4	147.3	156.3	162.1
100°	107.8	114.3	120.7	127.1	133.6	141.1	149.8	158.4	167.1	175.8	181.2
102.5°	133.9	139.4	144.9	150.4	155.9	163.1	171.9	180.6	189.4	198.2	203.5
105°	173.1	177.5	182.0	186.4	190.8	197.4	206.2	215.0	223.8	232.6	237.4
107.5°	217.9	221.6	225.3	228.9	232.6	238.2	245.8	253.3	260.8	268.4	273.5
110°	245.8	249.2	252.6	256.0	259.4	264.7	271.8	278.9	286.1	293.2	298.3



TEST NUMBER: P332129

CATALOG NUMBER: S123DIW-S560D755U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	275.5	278.2	280.9	283.7	286.4	291.0	297.6	304.2	310.9	317.5	322.5
115°	319.3	321.8	324.4	326.9	329.4	333.6	339.4	345.2	351.0	356.8	361.0
117.5°	364.0	365.6	367.1	368.7	370.3	373.8	379.1	384.4	389.8	395.1	399.1
120°	391.3	393.1	394.9	396.8	398.6	401.9	406.7	411.5	416.3	421.1	424.9
122.5°	420.4	421.5	422.7	423.9	425.0	428.1	433.0	437.9	442.8	447.7	451.1
125°	464.0	464.5	465.0	465.5	466.0	468.5	473.1	477.7	482.3	486.9	489.8
127.5°	504.9	505.8	506.7	507.6	508.5	510.8	514.5	518.2	522.0	525.7	528.1
130°	532.3	533.4	534.6	535.7	536.9	538.9	541.8	544.7	547.6	550.5	553.1
132.5°	559.0	560.2	561.5	562.8	564.1	565.9	568.3	570.6	573.0	575.4	577.7
135°	600.5	601.3	602.2	603.0	603.8	605.1	606.8	608.5	610.2	611.9	614.3
137.5°	639.0	639.7	640.3	641.0	641.7	642.8	644.3	645.8	647.3	648.7	650.7
140°	665.1	665.9	666.7	667.5	668.4	669.1	669.8	670.5	671.1	671.8	674.2
142.5°	689.4	690.1	690.8	691.5	692.2	692.7	693.1	693.5	693.9	694.3	696.4
145°	727.4	727.6	727.7	727.9	728.1	728.4	728.9	729.4	729.9	730.4	731.6
147.5°	759.9	760.5	761.1	761.7	762.3	762.8	763.3	763.7	764.2	764.7	765.1
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: P332129

CATALOG NUMBER: S123DIW-S560D755U835-4F0-1E-UDD-D1

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	128.7	130.4	132.2	134.0	135.7
90°	117.3	123.7	130.2	134.4	136.4	138.5	140.5	142.5
92.5°	122.5	128.7	134.9	138.7	140.0	141.4	142.8	144.1
95°	142.6	148.6	154.5	158.3	160.0	161.7	163.4	165.1
97.5°	167.9	173.8	179.6	183.3	185.0	186.6	188.2	189.9
100°	186.6	192.0	197.5	201.2	203.2	205.3	207.3	209.3
102.5°	208.8	214.1	219.4	222.8	224.5	226.1	227.8	229.4
105°	242.2	246.9	251.7	255.0	256.9	258.7	260.6	262.4
107.5°	278.6	283.6	288.7	291.9	293.2	294.5	295.8	297.1
110°	303.4	308.5	313.6	316.6	317.7	318.7	319.7	320.8



TEST NUMBER: P332129

CATALOG NUMBER: S123DIW-S560D755U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	327.6	332.7	337.8	341.0	342.5	343.9	345.3	346.8
115°	365.3	369.5	373.8	376.5	377.7	378.9	380.1	381.3
117.5°	403.1	407.1	411.1	413.6	414.5	415.3	416.2	417.1
120°	428.6	432.4	436.1	438.4	439.3	440.1	441.0	441.9
122.5°	454.4	457.8	461.1	463.2	463.9	464.6	465.4	466.1
125°	492.8	495.7	498.6	500.3	500.8	501.4	501.9	502.4
127.5°	530.6	533.0	535.5	536.9	537.3	537.7	538.1	538.5
130°	555.7	558.2	560.8	562.0	561.9	561.8	561.6	561.5
132.5°	580.0	582.3	584.6	585.9	586.1	586.4	586.7	586.9
135°	616.7	619.1	621.5	623.0	623.5	624.0	624.5	625.1
137.5°	652.7	654.7	656.7	657.8	658.1	658.3	658.5	658.7
140°	676.6	679.0	681.4	682.4	682.1	681.8	681.5	681.2
142.5°	698.5	700.7	702.8	703.8	703.8	703.7	703.7	703.7
145°	732.8	734.0	735.2	735.8	735.8	735.8	735.8	735.8
147.5°	765.5	765.9	766.3	766.3	765.9	765.6	765.2	764.8
150°	786.0	786.0	786.0	785.7	785.1	784.4	783.8	783.1
152.5°	805.6	805.8	806.1	805.8	805.0	804.2	803.5	802.7
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)