

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: P332777-840

Luminaire Tested: **S124DIW-S795D470U840-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332777-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIW-S795D470U840-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 470 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5164.5 lumens
Efficiency: N/A
Efficacy: 137.0 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: General Diffuse

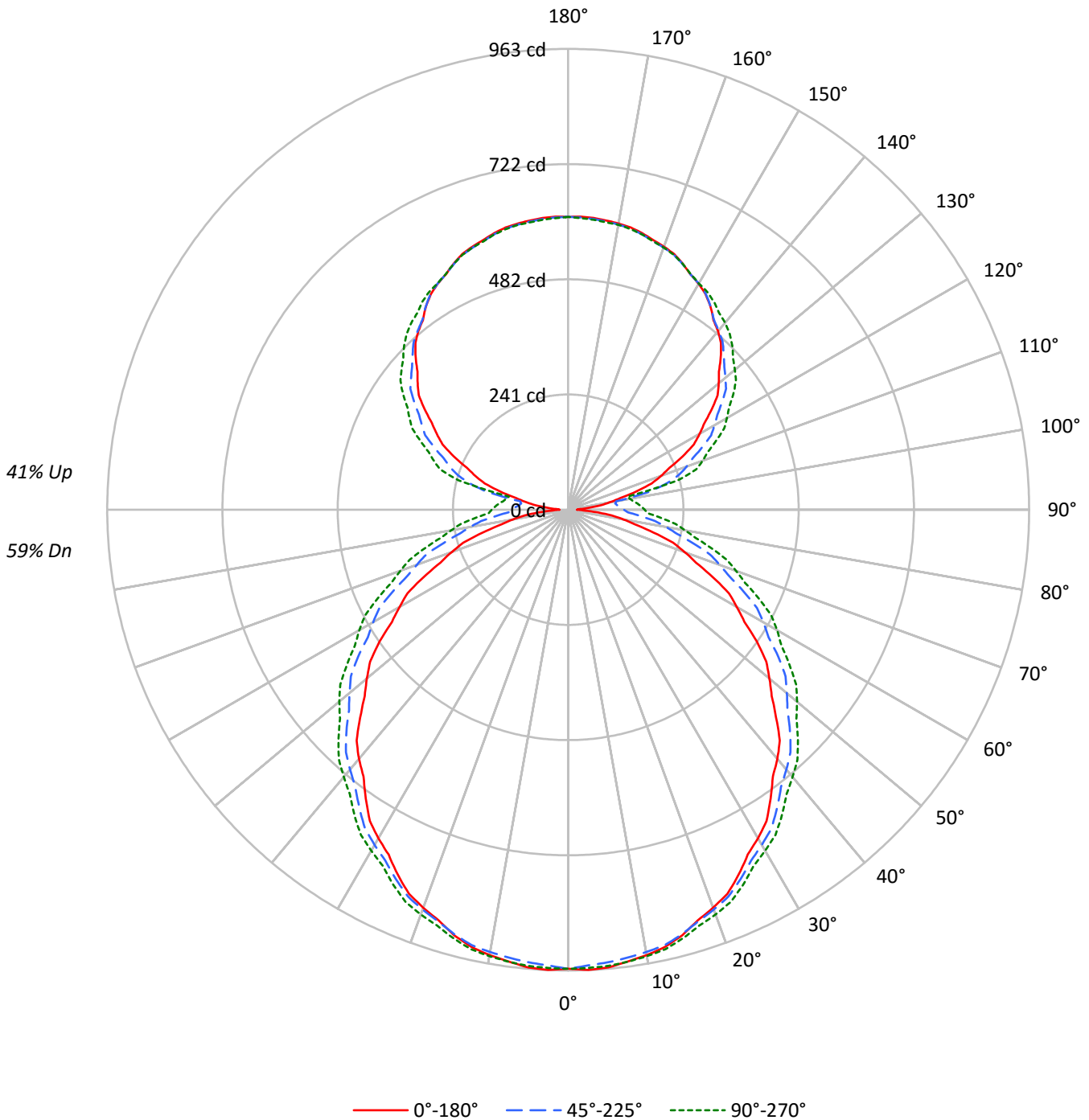
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332777-840

CATALOG NUMBER: S124DIW-S795D470U840-4F0-1E-UDD-D

Luminous Intensity Polar Plot





TEST NUMBER: P332777-840

CATALOG NUMBER: S124DIW-S795D470U840-4F0-1E-UDD-D

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	109	109	109	109	102	102	102	102	88	88	88	76	76	76	64	64	64
1	99	94	89	85	92	87	83	80	76	73	70	65	63	61	55	53	52
2	89	81	74	69	83	76	70	65	65	61	57	56	53	50	47	45	43
3	81	71	63	57	75	66	59	53	57	52	47	49	45	41	42	38	36
4	74	62	54	48	69	58	51	45	51	45	40	44	39	35	37	33	30
5	68	56	47	41	63	52	44	38	45	39	34	39	34	30	33	29	26
6	62	50	41	35	58	47	39	33	41	34	30	35	30	26	30	26	23
7	58	45	36	31	54	42	35	29	37	31	26	32	27	23	27	23	20
8	54	41	33	27	50	38	31	26	34	27	23	29	24	21	25	21	18
9	50	37	29	24	46	35	28	23	31	25	21	27	22	18	23	19	16
10	47	34	27	22	43	32	25	21	28	23	19	25	20	17	21	18	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7744	7744	7744
5°	7768	7569	7589
10°	7720	7444	7439
15°	7651	7301	7261
20°	7547	7143	7089
25°	7429	6965	6898
30°	7302	6789	6703
35°	7158	6609	6532
40°	7042	6436	6353
45°	6871	6278	6200
50°	6727	6095	6039
55°	6577	5924	5849
60°	6344	5704	5676
65°	6089	5468	5463
70°	5778	5200	5215
75°	5348	4904	4991
80°	4865	4620	4771
85°	4264	4369	4644



TEST NUMBER: P332777-840

CATALOG NUMBER: S124DIW-S795D470U840-4F0-1E-UDD-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.8	1.8
10°-20°	260.3	5.0
20°-30°	393.5	7.6
30°-40°	476.1	9.2
40°-50°	503.4	9.7
50°-60°	473.7	9.2
60°-70°	393.1	7.6
70°-80°	276.1	5.3
80°-90°	157.9	3.1
90°-100°	113.6	2.2
100°-110°	202.0	3.9
110°-120°	301.3	5.8
120°-130°	350.0	6.8
130°-140°	357.9	6.9
140°-150°	326.5	6.3
150°-160°	261.5	5.1
160°-170°	168.6	3.3
170°-180°	58.1	1.1
0°-30°	744.6	14.4
0°-40°	1220.8	23.6
0°-60°	2197.9	42.6
0°-90°	3024.9	58.6
90°-120°	617.0	11.9
90°-150°	1651.4	32.0
90°-180°	2140.0	41.4
0°-180°	5164.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	959	959	959	959	959	
5°	960	957	950	958	957	91
15°	921	921	918	928	927	259
25°	842	848	852	863	865	388
35°	737	750	760	775	779	461
45°	614	635	655	673	679	475
55°	481	504	536	557	564	429
65°	333	368	404	430	439	330
75°	185	225	270	299	309	196
85°	57	102	150	181	193	61
90°	19	67	116	149	160	13
95°	39	60	104	134	145	43
105°	147	173	214	243	237	155
115°	264	276	309	332	341	260
125°	366	368	392	414	421	327
135°	451	451	460	477	485	347
145°	518	519	519	525	531	324
155°	567	567	566	568	567	261
165°	598	596	596	599	595	169
175°	612	609	610	613	608	58
180°	612	612	612	612	612	



TEST NUMBER: P332777-840

CATALOG NUMBER: S124DIW-S795D470U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3
2.5°	962.7	962.1	961.5	961.0	960.4	959.4	957.8	956.2	954.7	953.2	954.5
5°	960.3	959.6	958.9	958.2	957.5	956.2	954.5	952.9	951.2	949.6	951.5
7.5°	952.1	951.7	951.3	950.9	950.4	949.5	948.2	946.7	945.3	944.0	946.1
10°	945.2	945.0	944.8	944.5	944.3	943.6	942.4	941.2	940.0	938.8	941.0
12.5°	935.8	935.7	935.7	935.6	935.6	935.2	934.4	933.5	932.7	931.9	933.9
15°	920.6	920.8	921.0	921.3	921.5	921.3	920.6	919.9	919.1	918.4	920.6
17.5°	899.7	900.4	901.1	901.9	902.6	902.8	902.7	902.6	902.4	902.3	904.5
20°	885.1	885.9	886.6	887.3	888.0	888.5	888.7	888.9	889.2	889.4	891.8
22.5°	868.8	869.7	870.6	871.5	872.4	873.1	873.5	873.9	874.3	874.8	877.2
25°	842.1	843.5	845.1	846.5	847.9	849.0	849.7	850.4	851.1	851.8	854.4
27.5°	812.5	814.6	816.7	818.8	820.9	822.5	823.6	824.7	825.8	826.9	829.3
30°	792.7	794.7	796.6	798.5	800.4	802.1	803.9	805.5	807.2	808.8	811.4
32.5°	771.2	773.6	775.9	778.1	780.4	782.4	784.4	786.2	788.1	789.9	792.9
35°	736.9	739.7	742.7	745.5	748.3	750.9	753.4	755.8	758.1	760.5	763.9
37.5°	702.3	705.6	708.9	712.2	715.5	718.6	721.5	724.5	727.5	730.4	733.9
40°	679.9	683.1	686.1	689.2	692.4	695.6	698.9	702.3	705.6	708.9	712.6
42.5°	654.2	657.6	661.2	664.6	668.1	671.8	675.7	679.6	683.6	687.4	691.5
45°	614.4	618.9	623.5	628.0	632.6	637.1	641.7	646.2	650.7	655.2	659.3
47.5°	576.4	581.1	585.7	590.5	595.1	600.1	605.3	610.6	615.8	621.1	625.3
50°	548.9	554.1	559.4	564.6	569.9	575.1	580.4	585.6	590.9	596.1	601.0
52.5°	521.4	526.6	531.9	537.1	542.4	548.1	554.0	560.1	566.1	572.1	576.8
55°	481.2	486.3	491.3	496.2	501.3	507.4	514.5	521.7	528.9	536.0	540.8
57.5°	436.4	442.5	448.8	454.9	461.1	467.8	474.9	482.0	489.2	496.2	501.9
60°	407.1	413.3	419.5	425.8	431.9	439.0	446.9	454.7	462.6	470.5	475.9
62.5°	378.7	385.6	392.3	399.1	405.9	413.2	421.1	429.0	436.9	444.7	450.2
65°	333.0	340.6	348.3	355.9	363.6	371.4	379.5	387.7	395.8	403.8	409.8
67.5°	288.9	297.1	305.2	313.3	321.4	329.8	338.5	347.2	355.9	364.6	370.6
70°	258.8	267.0	275.1	283.3	291.3	299.9	309.0	318.1	327.1	336.2	342.6
72.5°	229.6	237.9	246.3	254.6	262.9	271.9	281.6	291.1	300.8	310.4	316.7
75°	184.8	193.6	202.4	211.3	220.0	229.5	239.5	249.5	259.6	269.6	276.3
77.5°	142.9	152.2	161.6	171.0	180.3	190.3	200.8	211.3	221.8	232.3	239.0
80°	117.0	126.6	136.1	145.7	155.3	165.3	175.8	186.3	196.8	207.3	214.5
82.5°	91.3	101.2	111.2	121.1	131.0	141.3	151.8	162.3	172.8	183.3	190.6
85°	57.0	67.0	77.0	87.1	97.0	107.4	118.2	128.9	139.7	150.4	157.5
87.5°	32.1	42.0	52.0	62.0	71.9	82.2	92.8	103.4	114.1	124.7	131.7
90°	18.6	29.2	39.9	50.6	61.2	72.1	83.2	94.2	105.3	116.4	123.9
92.5°	22.1	30.7	39.4	48.1	56.8	66.6	77.7	88.8	99.8	110.9	118.3
95°	39.2	43.5	48.0	52.4	56.9	63.9	73.8	83.7	93.6	103.5	110.6
97.5°	66.1	75.0	84.0	92.9	101.9	105.5	103.8	102.2	100.6	98.9	105.2
100°	86.8	94.9	102.9	111.0	119.1	120.7	115.9	111.2	106.5	101.8	106.4
102.5°	111.1	117.9	124.6	131.4	138.1	145.2	152.5	159.8	167.0	174.4	182.0
105°	147.4	152.8	158.2	163.6	169.0	176.3	185.7	195.0	204.4	213.7	220.6
107.5°	183.0	187.2	191.5	195.7	199.9	206.5	215.6	224.6	233.7	242.7	249.0
110°	206.3	210.0	213.6	217.2	220.9	227.2	236.2	245.1	254.1	263.1	268.7



TEST NUMBER: P332777-840

CATALOG NUMBER: S124DIW-S795D470U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	228.8	232.4	235.9	239.4	242.9	248.8	257.0	265.3	273.6	281.9	287.1
115°	263.7	266.1	268.5	271.0	273.5	278.4	286.0	293.6	301.0	308.6	314.1
117.5°	295.9	297.6	299.3	301.0	302.8	307.2	314.6	321.9	329.2	336.6	341.5
120°	317.0	318.2	319.3	320.4	321.5	325.5	332.3	339.1	346.0	352.7	357.8
122.5°	337.6	337.9	338.3	338.7	339.1	342.6	349.3	356.0	362.6	369.4	374.3
125°	365.9	366.1	366.2	366.4	366.5	369.5	375.3	381.0	386.8	392.5	397.4
127.5°	393.4	393.3	393.2	393.0	392.9	395.4	400.4	405.5	410.5	415.6	419.8
130°	410.5	410.4	410.3	410.1	410.0	412.0	416.2	420.2	424.3	428.5	432.9
132.5°	427.1	427.0	426.9	426.9	426.8	428.5	431.9	435.4	438.8	442.2	446.5
135°	450.7	450.6	450.5	450.4	450.3	451.2	453.3	455.4	457.5	459.6	463.6
137.5°	472.5	472.3	472.1	471.9	471.7	472.3	473.5	474.8	476.1	477.4	481.0
140°	486.9	486.8	486.8	486.8	486.7	486.9	487.4	487.8	488.2	488.7	492.1
142.5°	498.8	499.1	499.4	499.8	500.1	500.2	500.2	500.2	500.2	500.1	503.0
145°	518.3	518.3	518.4	518.5	518.5	518.6	518.6	518.6	518.6	518.6	520.1
147.5°	533.9	534.2	534.5	534.9	535.2	535.3	535.2	535.1	535.0	534.9	535.2
150°	545.2	545.4	545.6	545.7	545.9	545.9	545.8	545.7	545.6	545.5	545.5
152.5°	553.9	554.2	554.4	554.7	555.0	555.0	554.9	554.7	554.5	554.3	554.5
155°	567.0	567.1	567.2	567.3	567.4	567.3	567.0	566.7	566.4	566.1	566.5
157.5°	578.3	578.2	578.1	578.1	578.0	577.8	577.5	577.1	576.8	576.5	577.0
160°	584.9	584.6	584.3	584.0	583.7	583.5	583.4	583.3	583.2	583.1	583.7
162.5°	590.8	590.4	590.0	589.6	589.3	589.0	588.9	588.8	588.7	588.5	589.2
165°	598.1	597.6	597.1	596.6	596.1	595.9	595.9	595.9	595.9	595.9	596.7
167.5°	604.0	603.5	603.0	602.5	601.9	601.6	601.6	601.5	601.5	601.4	602.3
170°	607.3	606.7	606.1	605.5	604.9	604.6	604.7	604.8	604.9	605.0	605.8
172.5°	609.6	608.9	608.3	607.7	607.1	606.8	606.9	607.0	607.1	607.2	608.0
175°	611.9	611.3	610.7	610.1	609.5	609.3	609.4	609.5	609.6	609.7	610.6
177.5°	613.0	612.5	611.9	611.3	610.8	610.6	610.7	610.9	611.0	611.2	611.8
180°	611.9	611.9	611.9	611.9	611.9	611.9	611.9	611.9	611.9	611.9	611.9



TEST NUMBER: P332777-840

CATALOG NUMBER: S124DIW-S795D470U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3
2.5°	955.8	957.3	958.6	959.2	959.0	958.8	958.6	958.4
5°	953.4	955.3	957.2	958.1	957.8	957.6	957.4	957.0
7.5°	948.3	950.4	952.6	953.5	953.3	953.0	952.8	952.6
10°	943.1	945.2	947.5	948.4	948.2	947.9	947.7	947.5
12.5°	935.8	937.9	939.8	940.7	940.7	940.6	940.6	940.5
15°	922.7	924.8	927.0	928.0	927.8	927.5	927.3	927.0
17.5°	906.7	908.9	911.1	912.1	911.9	911.7	911.5	911.3
20°	894.1	896.6	899.0	900.2	900.2	900.2	900.2	900.2
22.5°	879.6	881.9	884.3	885.8	886.2	886.5	886.9	887.3
25°	857.1	859.7	862.3	863.7	863.9	864.2	864.4	864.7
27.5°	831.7	834.1	836.7	838.0	838.3	838.6	838.9	839.1
30°	814.1	816.7	819.3	820.9	821.4	821.8	822.3	822.8
32.5°	796.0	799.0	801.9	803.8	804.2	804.7	805.2	805.7
35°	767.2	770.5	773.9	775.9	776.6	777.3	778.1	778.8
37.5°	737.2	740.6	744.0	746.1	746.8	747.6	748.3	749.1
40°	716.1	719.7	723.3	725.5	726.5	727.4	728.4	729.3
42.5°	695.4	699.3	703.3	705.7	706.4	707.2	708.0	708.7
45°	663.4	667.4	671.5	674.1	675.3	676.5	677.7	678.8
47.5°	629.4	633.7	637.9	640.7	642.2	643.6	645.0	646.4
50°	605.7	610.5	615.2	618.3	619.8	621.3	622.7	624.1
52.5°	581.7	586.4	591.2	594.3	595.7	597.1	598.5	600.1
55°	545.5	550.4	555.1	558.3	559.7	561.1	562.5	563.9
57.5°	507.7	513.3	519.0	522.5	523.8	525.1	526.5	527.9
60°	481.5	487.0	492.4	496.1	498.1	500.0	501.9	503.8
62.5°	455.7	461.2	466.7	470.4	472.3	474.2	476.1	478.0
65°	415.9	421.8	427.8	431.7	433.6	435.6	437.4	439.3
67.5°	376.7	382.7	388.8	392.7	394.7	396.5	398.4	400.2
70°	349.1	355.6	362.0	366.1	367.7	369.4	371.0	372.7
72.5°	323.0	329.2	335.5	339.5	341.3	343.3	345.1	347.0
75°	283.0	289.6	296.4	300.7	303.0	305.1	307.2	309.3
77.5°	245.8	252.6	259.3	263.9	266.2	268.4	270.7	273.1
80°	221.7	228.8	236.0	240.4	242.4	244.3	246.2	248.1
82.5°	197.9	205.3	212.7	217.4	219.4	221.6	223.7	225.8
85°	164.7	171.9	179.0	183.8	186.2	188.5	191.0	193.4
87.5°	138.8	145.8	152.9	157.4	159.6	161.8	163.9	166.0
90°	131.5	139.1	146.5	151.4	153.5	155.6	157.7	159.9
92.5°	125.5	132.9	140.3	144.9	146.8	148.8	150.8	152.7
95°	117.6	124.7	131.8	136.4	138.7	140.9	143.1	145.4
97.5°	111.5	117.9	124.1	128.4	130.5	132.7	134.8	136.9
100°	111.2	115.9	120.7	123.9	125.6	127.4	129.2	131.0
102.5°	149.6	137.1	124.8	119.5	121.4	123.3	125.1	127.0
105°	227.4	234.3	241.3	243.8	242.1	240.2	238.5	236.8
107.5°	255.3	261.7	268.0	272.2	274.3	276.4	278.5	280.6
110°	274.5	280.1	285.8	289.8	292.1	294.2	296.4	298.6



TEST NUMBER: P332777-840

CATALOG NUMBER: S124DIW-S795D470U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	292.4	297.6	302.9	306.6	308.9	311.2	313.6	315.8
115°	319.5	325.0	330.4	334.0	335.7	337.3	339.0	340.7
117.5°	346.4	351.3	356.3	359.7	361.5	363.5	365.3	367.2
120°	362.7	367.7	372.7	376.1	377.8	379.4	381.1	382.8
122.5°	379.2	384.1	388.9	392.1	393.6	395.2	396.7	398.2
125°	402.2	407.1	411.9	415.1	416.7	418.2	419.7	421.2
127.5°	424.0	428.3	432.5	435.5	437.0	438.5	440.0	441.6
130°	437.3	441.7	446.1	449.0	450.4	451.9	453.3	454.7
132.5°	450.7	454.8	459.1	461.9	463.2	464.5	466.0	467.3
135°	467.6	471.6	475.6	478.5	480.1	481.7	483.4	485.0
137.5°	484.7	488.5	492.1	494.5	495.7	496.9	498.0	499.1
140°	495.4	498.9	502.3	504.6	505.9	507.3	508.6	509.8
142.5°	506.0	509.0	511.9	513.9	514.9	515.9	516.9	518.0
145°	521.6	523.1	524.7	526.0	527.1	528.4	529.5	530.7
147.5°	535.4	535.7	536.0	536.5	537.5	538.4	539.2	540.1
150°	545.5	545.5	545.5	545.6	545.7	545.8	545.9	546.0
152.5°	554.6	554.8	555.0	555.0	555.0	554.9	554.8	554.8
155°	566.9	567.3	567.7	567.8	567.5	567.2	566.9	566.6
157.5°	577.5	578.0	578.6	578.6	578.0	577.5	577.0	576.5
160°	584.3	584.9	585.5	585.5	584.9	584.3	583.7	583.1
162.5°	589.8	590.4	591.0	591.0	590.3	589.6	588.9	588.2
165°	597.5	598.3	599.2	599.1	598.1	597.2	596.3	595.4
167.5°	603.2	604.1	605.0	604.9	603.9	602.9	601.9	600.9
170°	606.6	607.4	608.3	608.2	607.1	606.1	605.1	604.1
172.5°	608.8	609.7	610.5	610.4	609.3	608.1	607.0	605.9
175°	611.5	612.4	613.3	613.1	611.9	610.7	609.5	608.2
177.5°	612.5	613.1	613.8	613.6	612.7	611.7	610.7	609.8
180°	611.9	611.9	611.9	611.9	611.9	611.9	611.9	611.9

(END OF REPORT)