

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

Luminaire Tested: **S124DIW-S795D470U835-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332777
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-S795D470U835-4F0-1E-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: 5114.0 lumens
Efficiency: N/A
Efficacy: 135.7 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

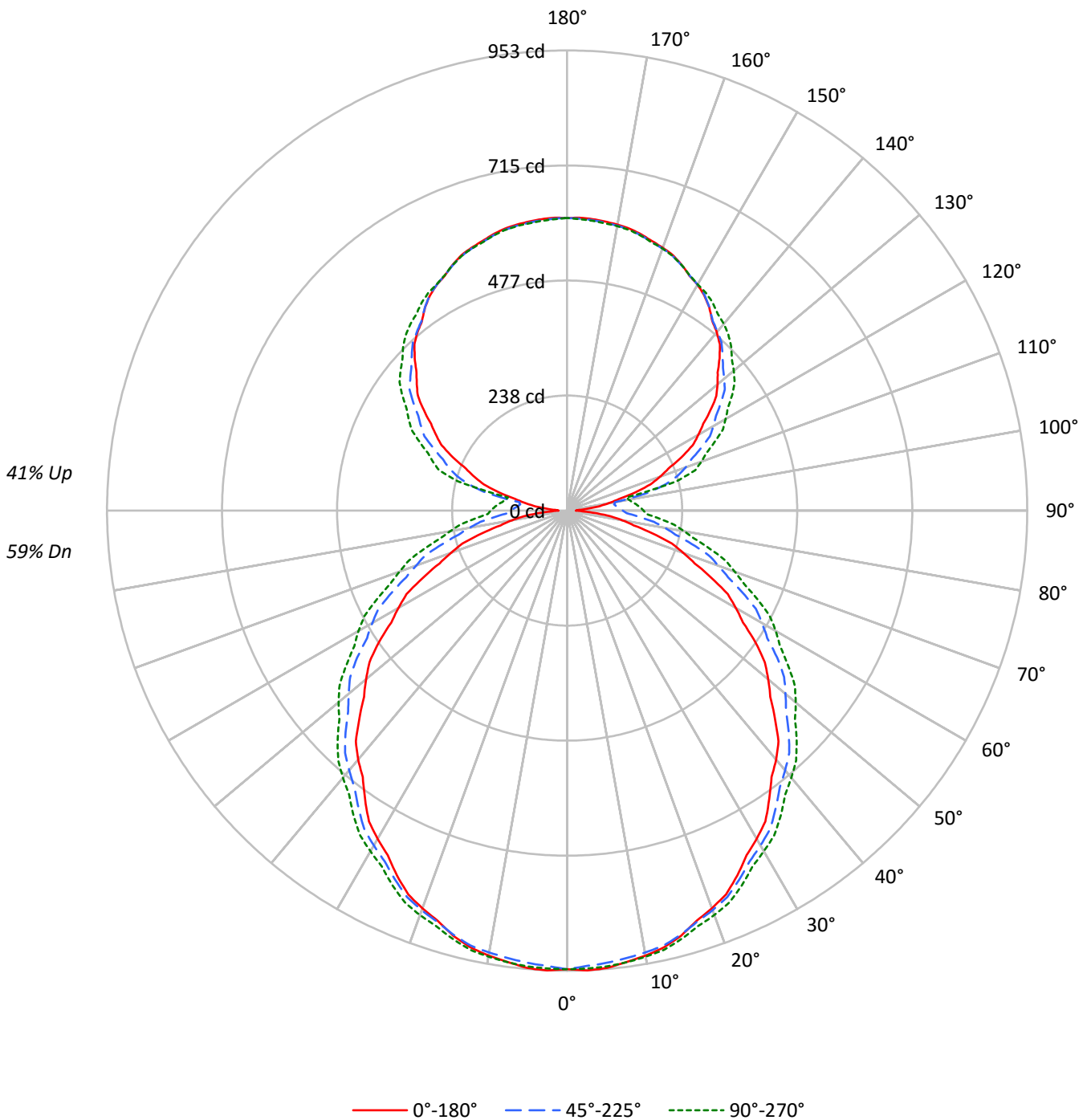
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0													
RCR																																					
0	109	109	109	109	102	102	102	102	88	88	88	76	76	76	64	64	64	59																			
1	99	94	89	85	92	87	83	80	76	73	70	65	63	61	55	53	52	47																			
2	89	81	74	69	83	76	70	65	65	61	57	56	53	50	47	45	43	38																			
3	81	71	63	57	75	66	59	53	57	52	47	49	45	41	42	38	36	32																			
4	74	62	54	48	69	58	51	45	51	45	40	44	39	35	37	33	30	27																			
5	68	56	47	41	63	52	44	38	45	39	34	39	34	30	33	29	26	23																			
6	62	50	41	35	58	47	39	33	41	34	30	35	30	26	30	26	23	20																			
7	58	45	36	31	54	42	35	29	37	31	26	32	27	23	27	23	20	18																			
8	54	41	33	27	50	38	31	26	34	27	23	29	24	21	25	21	18	16																			
9	50	37	29	24	46	35	28	23	31	25	21	27	22	18	23	19	16	14																			
10	47	34	27	22	43	32	25	21	28	23	19	25	20	17	21	18	15	13																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7668	7668	7668
5°	7692	7494	7516
10°	7645	7371	7366
15°	7577	7230	7190
20°	7473	7073	7019
25°	7357	6898	6831
30°	7231	6723	6637
35°	7088	6544	6468
40°	6974	6374	6291
45°	6804	6217	6140
50°	6661	6036	5980
55°	6513	5866	5792
60°	6282	5649	5621
65°	6029	5415	5409
70°	5722	5149	5165
75°	5296	4857	4943
80°	4819	4575	4724
85°	4219	4325	4598



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.9	1.8
10°-20°	257.7	5.0
20°-30°	389.7	7.6
30°-40°	471.5	9.2
40°-50°	498.5	9.7
50°-60°	469.1	9.2
60°-70°	389.2	7.6
70°-80°	273.4	5.3
80°-90°	156.3	3.1
90°-100°	112.5	2.2
100°-110°	200.1	3.9
110°-120°	298.4	5.8
120°-130°	346.6	6.8
130°-140°	354.4	6.9
140°-150°	323.3	6.3
150°-160°	258.9	5.1
160°-170°	167.0	3.3
170°-180°	57.6	1.1
0°-30°	737.4	14.4
0°-40°	1208.8	23.6
0°-60°	2176.4	42.6
0°-90°	2995.3	58.6
90°-120°	610.9	11.9
90°-150°	1635.3	32.0
90°-180°	2119.0	41.4
0°-180°	5114.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	950	950	950	950	950	
5°	951	948	940	948	948	90
15°	912	912	909	918	918	257
25°	834	840	844	855	856	384
35°	730	742	753	767	771	457
45°	608	629	649	666	672	470
55°	476	499	531	551	558	424
65°	330	364	400	426	435	327
75°	183	223	267	296	306	195
85°	56	101	149	180	192	60
90°	18	66	115	148	158	12
95°	39	60	102	133	144	43
105°	146	171	212	240	234	154
115°	261	273	306	329	337	257
125°	362	364	389	409	417	324
135°	446	446	455	472	480	344
145°	513	513	514	520	526	321
155°	562	562	561	562	561	259
165°	592	590	590	593	590	167
175°	606	603	604	607	602	58
180°	606	606	606	606	606	



TEST NUMBER: P332777

CATALOG NUMBER: S124DIW-S795D470U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	949.9	949.9	949.9	949.9	949.9	949.9	949.9	949.9	949.9	949.9	949.9
2.5°	953.3	952.7	952.1	951.6	951.0	950.0	948.4	946.9	945.4	943.9	945.2
5°	950.9	950.2	949.5	948.8	948.1	946.9	945.2	943.6	941.9	940.3	942.2
7.5°	942.8	942.4	942.0	941.6	941.1	940.2	938.9	937.5	936.1	934.8	936.9
10°	936.0	935.8	935.6	935.3	935.1	934.4	933.2	932.0	930.8	929.6	931.8
12.5°	926.7	926.6	926.6	926.5	926.5	926.1	925.3	924.4	923.6	922.8	924.8
15°	911.6	911.8	912.0	912.3	912.5	912.3	911.6	910.9	910.1	909.4	911.6
17.5°	890.9	891.6	892.3	893.1	893.8	894.0	893.9	893.8	893.6	893.5	895.7
20°	876.5	877.2	877.9	878.6	879.3	879.8	880.0	880.2	880.5	880.7	883.1
22.5°	860.3	861.2	862.1	863.0	863.9	864.6	865.0	865.4	865.8	866.3	868.6
25°	833.9	835.3	836.8	838.2	839.6	840.7	841.4	842.1	842.8	843.5	846.1
27.5°	804.6	806.6	808.7	810.8	812.9	814.5	815.6	816.6	817.7	818.8	821.2
30°	785.0	786.9	788.8	790.7	792.6	794.3	796.0	797.6	799.3	800.9	803.5
32.5°	763.7	766.0	768.3	770.5	772.8	774.8	776.7	778.5	780.4	782.2	785.2
35°	729.7	732.5	735.4	738.2	741.0	743.6	746.0	748.4	750.7	753.1	756.4
37.5°	695.4	698.7	702.0	705.2	708.5	711.6	714.5	717.4	720.4	723.3	726.7
40°	673.3	676.4	679.4	682.5	685.6	688.8	692.1	695.4	698.7	702.0	705.6
42.5°	647.8	651.2	654.7	658.1	661.6	665.2	669.1	673.0	676.9	680.7	684.7
45°	608.4	612.9	617.4	621.9	626.4	630.9	635.4	639.9	644.3	648.8	652.9
47.5°	570.8	575.4	580.0	584.7	589.3	594.2	599.4	604.6	609.8	615.0	619.2
50°	543.5	548.7	553.9	559.1	564.3	569.5	574.7	579.9	585.1	590.3	595.1
52.5°	516.3	521.5	526.7	531.9	537.1	542.7	548.6	554.6	560.6	566.5	571.2
55°	476.5	481.5	486.5	491.4	496.4	502.4	509.5	516.6	523.7	530.8	535.5
57.5°	432.1	438.2	444.4	450.5	456.6	463.2	470.3	477.3	484.4	491.4	497.0
60°	403.1	409.3	415.4	421.6	427.7	434.7	442.5	450.3	458.1	465.9	471.3
62.5°	375.0	381.8	388.5	395.2	401.9	409.2	417.0	424.8	432.6	440.4	445.8
65°	329.7	337.3	344.9	352.4	360.0	367.8	375.8	383.9	391.9	399.9	405.8
67.5°	286.1	294.2	302.2	310.2	318.3	326.6	335.2	343.8	352.4	361.0	367.0
70°	256.3	264.4	272.4	280.5	288.5	297.0	306.0	315.0	323.9	332.9	339.3
72.5°	227.4	235.6	243.9	252.1	260.3	269.2	278.8	288.3	297.9	307.4	313.6
75°	183.0	191.7	200.4	209.2	217.9	227.3	237.2	247.1	257.1	267.0	273.6
77.5°	141.5	150.7	160.0	169.3	178.5	188.4	198.8	209.2	219.6	230.0	236.7
80°	115.9	125.4	134.8	144.3	153.8	163.7	174.1	184.5	194.9	205.3	212.4
82.5°	90.4	100.2	110.1	119.9	129.7	139.9	150.3	160.7	171.1	181.5	188.7
85°	56.4	66.3	76.2	86.2	96.1	106.4	117.0	127.6	138.3	148.9	156.0
87.5°	31.8	41.6	51.5	61.4	71.2	81.4	91.9	102.4	113.0	123.5	130.4
90°	18.4	28.9	39.5	50.1	60.6	71.4	82.4	93.3	104.3	115.3	122.7
92.5°	21.9	30.4	39.0	47.6	56.2	65.9	76.9	87.9	98.8	109.8	117.1
95°	38.8	43.1	47.5	51.9	56.3	63.3	73.1	82.9	92.7	102.5	109.5
97.5°	65.5	74.3	83.2	92.0	100.9	104.5	102.8	101.2	99.6	97.9	104.2
100°	86.0	94.0	101.9	109.9	117.9	119.5	114.8	110.1	105.5	100.8	105.4
102.5°	110.0	116.7	123.4	130.1	136.8	143.8	151.0	158.2	165.4	172.7	160.4
105°	146.0	151.3	156.7	162.0	167.3	174.6	183.9	193.1	202.4	211.6	218.4
107.5°	181.2	185.4	189.6	193.8	197.9	204.5	213.5	222.4	231.4	240.3	246.6
110°	204.3	207.9	211.5	215.1	218.7	225.0	233.9	242.7	251.6	260.5	266.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	226.6	230.1	233.6	237.1	240.5	246.4	254.5	262.7	270.9	279.1	284.3
115°	261.1	263.5	265.9	268.4	270.8	275.7	283.2	290.7	298.1	305.6	311.0
117.5°	293.0	294.7	296.4	298.1	299.8	304.2	311.5	318.8	326.0	333.3	338.2
120°	313.9	315.1	316.2	317.3	318.4	322.3	329.1	335.8	342.6	349.3	354.3
122.5°	334.3	334.6	335.0	335.4	335.8	339.3	345.9	352.5	359.1	365.8	370.6
125°	362.3	362.5	362.6	362.8	362.9	365.9	371.6	377.3	383.0	388.7	393.5
127.5°	389.6	389.5	389.4	389.2	389.1	391.5	396.5	401.5	406.5	411.5	415.7
130°	406.5	406.4	406.3	406.1	406.0	408.0	412.1	416.1	420.2	424.3	428.7
132.5°	422.9	422.8	422.7	422.7	422.6	424.3	427.7	431.1	434.5	437.9	442.1
135°	446.3	446.2	446.1	446.0	445.9	446.8	448.9	451.0	453.0	455.1	459.1
137.5°	467.9	467.7	467.5	467.3	467.1	467.7	468.9	470.2	471.4	472.7	476.3
140°	482.1	482.0	482.0	482.0	481.9	482.1	482.6	483.0	483.4	483.9	487.3
142.5°	493.9	494.2	494.5	494.9	495.2	495.3	495.3	495.3	495.3	495.2	498.1
145°	513.2	513.2	513.3	513.4	513.4	513.5	513.5	513.5	513.5	513.5	515.0
147.5°	528.7	529.0	529.3	529.7	530.0	530.1	530.0	529.9	529.8	529.7	530.0
150°	539.9	540.1	540.3	540.4	540.6	540.6	540.5	540.4	540.3	540.2	540.2
152.5°	548.5	548.8	549.0	549.3	549.6	549.6	549.5	549.3	549.1	548.9	549.1
155°	561.5	561.6	561.7	561.8	561.9	561.8	561.5	561.2	560.9	560.6	561.0
157.5°	572.7	572.6	572.5	572.5	572.4	572.2	571.9	571.5	571.2	570.9	571.4
160°	579.2	578.9	578.6	578.3	578.0	577.8	577.7	577.6	577.5	577.4	578.0
162.5°	585.0	584.6	584.2	583.8	583.5	583.2	583.1	583.0	582.9	582.8	583.4
165°	592.3	591.8	591.3	590.8	590.3	590.1	590.1	590.1	590.1	590.1	590.9
167.5°	598.1	597.6	597.1	596.6	596.0	595.7	595.7	595.6	595.6	595.5	596.4
170°	601.4	600.8	600.2	599.6	599.0	598.7	598.8	598.9	599.0	599.1	599.9
172.5°	603.6	603.0	602.4	601.8	601.2	600.9	601.0	601.1	601.2	601.3	602.1
175°	605.9	605.3	604.7	604.1	603.5	603.3	603.4	603.5	603.6	603.7	604.6
177.5°	607.0	606.5	605.9	605.3	604.8	604.6	604.7	604.9	605.0	605.2	605.8
180°	605.9	605.9	605.9	605.9	605.9	605.9	605.9	605.9	605.9	605.9	605.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	949.9	949.9	949.9	949.9	949.9	949.9	949.9	949.9
2.5°	946.5	947.9	949.2	949.8	949.6	949.4	949.2	949.0
5°	944.1	946.0	947.8	948.7	948.4	948.2	948.0	947.7
7.5°	939.0	941.1	943.3	944.2	944.0	943.7	943.5	943.3
10°	933.9	936.0	938.2	939.1	938.9	938.6	938.4	938.2
12.5°	926.7	928.7	930.6	931.5	931.5	931.4	931.4	931.3
15°	913.7	915.8	917.9	918.9	918.7	918.4	918.2	917.9
17.5°	897.8	900.0	902.2	903.2	903.0	902.8	902.6	902.4
20°	885.4	887.8	890.2	891.4	891.4	891.4	891.4	891.4
22.5°	871.0	873.3	875.7	877.1	877.5	877.8	878.2	878.6
25°	848.7	851.3	853.9	855.3	855.5	855.8	856.0	856.3
27.5°	823.6	826.0	828.5	829.8	830.1	830.4	830.7	830.9
30°	806.1	808.7	811.3	812.9	813.4	813.8	814.3	814.8
32.5°	788.2	791.2	794.1	795.9	796.3	796.8	797.3	797.8
35°	759.7	763.0	766.3	768.3	769.0	769.7	770.5	771.2
37.5°	730.0	733.4	736.7	738.8	739.5	740.3	741.0	741.8
40°	709.1	712.7	716.2	718.4	719.4	720.3	721.3	722.2
42.5°	688.6	692.5	696.4	698.8	699.5	700.3	701.1	701.8
45°	656.9	660.9	664.9	667.5	668.7	669.9	671.1	672.2
47.5°	623.3	627.5	631.7	634.4	635.9	637.3	638.7	640.1
50°	599.8	604.5	609.2	612.3	613.7	615.2	616.6	618.0
52.5°	576.0	580.7	585.4	588.5	589.9	591.3	592.7	594.2
55°	540.2	545.0	549.7	552.8	554.2	555.6	557.0	558.4
57.5°	502.7	508.3	513.9	517.4	518.7	520.0	521.4	522.7
60°	476.8	482.2	487.6	491.3	493.2	495.1	497.0	498.9
62.5°	451.2	456.7	462.1	465.8	467.7	469.6	471.4	473.3
65°	411.8	417.7	423.6	427.5	429.4	431.3	433.1	435.0
67.5°	373.0	379.0	385.0	388.9	390.8	392.6	394.5	396.3
70°	345.7	352.1	358.5	362.5	364.1	365.8	367.4	369.1
72.5°	319.8	326.0	332.2	336.2	338.0	339.9	341.7	343.6
75°	280.2	286.8	293.5	297.8	300.0	302.1	304.2	306.3
77.5°	243.4	250.1	256.8	261.3	263.6	265.8	268.1	270.4
80°	219.5	226.6	233.7	238.1	240.0	241.9	243.8	245.7
82.5°	196.0	203.3	210.6	215.3	217.3	219.4	221.5	223.6
85°	163.1	170.2	177.3	182.0	184.4	186.7	189.1	191.5
87.5°	137.4	144.4	151.4	155.9	158.0	160.2	162.3	164.4
90°	130.2	137.7	145.1	149.9	152.0	154.1	156.2	158.3
92.5°	124.3	131.6	138.9	143.5	145.4	147.3	149.3	151.2
95°	116.5	123.5	130.5	135.1	137.3	139.5	141.7	144.0
97.5°	110.4	116.7	122.9	127.1	129.2	131.4	133.5	135.6
100°	110.1	114.8	119.5	122.7	124.4	126.2	127.9	129.7
102.5°	148.1	135.8	123.6	118.3	120.2	122.1	123.9	125.8
105°	225.2	232.0	238.9	241.4	239.7	237.9	236.2	234.5
107.5°	252.8	259.1	265.4	269.5	271.6	273.7	275.8	277.9
110°	271.8	277.4	283.0	287.0	289.2	291.3	293.5	295.7



TEST NUMBER: P332777

CATALOG NUMBER: S124DIW-S795D470U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	289.5	294.7	299.9	303.6	305.9	308.2	310.5	312.7
115°	316.4	321.8	327.2	330.7	332.4	334.0	335.7	337.4
117.5°	343.0	347.9	352.8	356.2	358.0	359.9	361.7	363.6
120°	359.2	364.1	369.1	372.4	374.1	375.7	377.4	379.1
122.5°	375.5	380.3	385.1	388.3	389.8	391.3	392.8	394.3
125°	398.3	403.1	407.9	411.0	412.6	414.1	415.6	417.1
127.5°	419.9	424.1	428.3	431.2	432.7	434.2	435.7	437.3
130°	433.0	437.4	441.7	444.6	446.0	447.5	448.9	450.3
132.5°	446.3	450.4	454.6	457.4	458.7	460.0	461.4	462.7
135°	463.0	467.0	471.0	473.8	475.4	477.0	478.7	480.3
137.5°	480.0	483.7	487.3	489.7	490.9	492.0	493.1	494.2
140°	490.6	494.0	497.4	499.7	501.0	502.3	503.6	504.8
142.5°	501.1	504.0	506.9	508.9	509.9	510.9	511.9	512.9
145°	516.5	518.0	519.6	520.9	522.0	523.2	524.3	525.5
147.5°	530.2	530.5	530.8	531.3	532.2	533.1	533.9	534.8
150°	540.2	540.2	540.2	540.3	540.4	540.5	540.6	540.7
152.5°	549.2	549.4	549.6	549.6	549.6	549.5	549.4	549.4
155°	561.4	561.8	562.2	562.3	562.0	561.7	561.4	561.1
157.5°	571.9	572.4	572.9	572.9	572.4	571.9	571.4	570.9
160°	578.6	579.2	579.8	579.8	579.2	578.6	578.0	577.4
162.5°	584.0	584.6	585.2	585.2	584.5	583.8	583.1	582.5
165°	591.7	592.5	593.3	593.2	592.3	591.4	590.5	589.6
167.5°	597.3	598.2	599.1	599.0	598.0	597.0	596.0	595.0
170°	600.7	601.5	602.4	602.3	601.2	600.2	599.2	598.2
172.5°	602.9	603.7	604.5	604.4	603.3	602.2	601.1	600.0
175°	605.5	606.4	607.3	607.1	605.9	604.7	603.5	602.3
177.5°	606.5	607.1	607.8	607.6	606.7	605.7	604.7	603.8
180°	605.9	605.9	605.9	605.9	605.9	605.9	605.9	605.9

(END OF REPORT)