

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: P332593

Luminaire Tested: **S124DIP-S795D590U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332593  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124DIP-S795D590U835-4F0-1E-UDD-D1  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 590 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

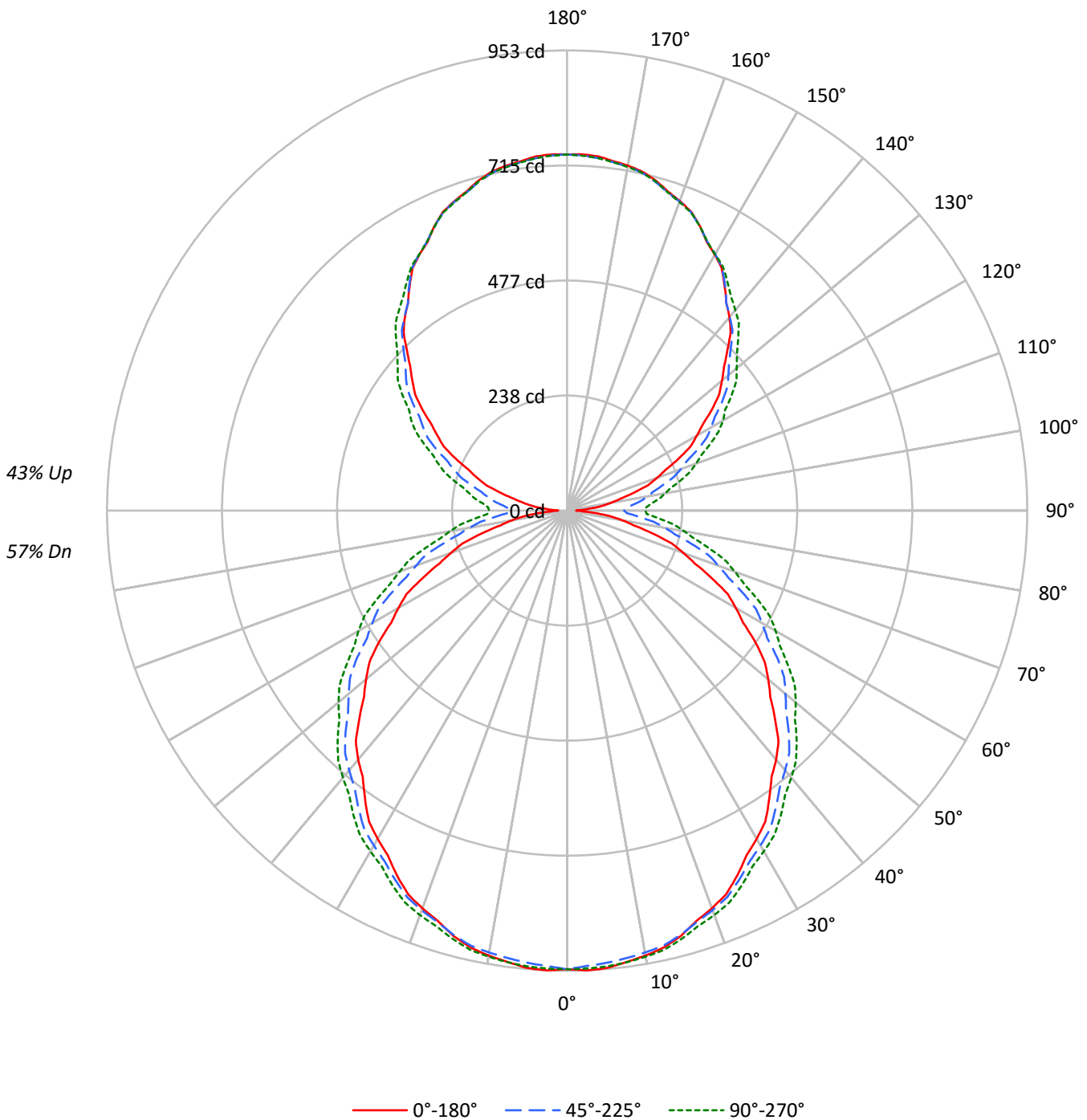
Lumens per Lamp: N/A  
Luminaire Lumens: 5286.2 lumens  
Efficiency: N/A  
Efficacy: 131.2 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')  
CIE Type: General Diffuse  
  
Input Watts (W): 40.3  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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				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	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62	57
1	98	93	89	85	91	87	83	80	75	72	69	63	61	59	53	52	50	45
2	89	81	74	68	82	75	69	64	65	60	56	55	52	49	46	44	41	37
3	81	71	63	56	75	66	59	53	57	51	47	48	44	41	40	37	35	31
4	74	62	54	47	68	58	51	45	50	44	40	43	38	35	36	32	30	26
5	68	55	47	40	62	52	44	38	45	39	34	38	33	30	32	29	26	22
6	62	50	41	35	58	46	39	33	40	34	29	34	30	26	29	25	22	20
7	57	45	36	31	53	42	34	29	36	30	26	31	26	23	27	23	20	17
8	53	40	32	27	49	38	31	26	33	27	23	29	24	20	24	21	18	15
9	50	37	29	24	46	35	28	23	30	25	20	26	22	18	22	19	16	14
10	46	34	26	21	43	32	25	20	28	22	18	24	20	16	21	17	14	12

**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	1.7
10°-20°	257.7	4.9
20°-30°	389.7	7.4
30°-40°	471.5	8.9
40°-50°	498.5	9.4
50°-60°	469.1	8.9
60°-70°	389.2	7.4
70°-80°	273.4	5.2
80°-90°	156.8	3.0
90°-100°	140.4	2.7
100°-110°	212.0	4.0
110°-120°	290.2	5.5
120°-130°	348.2	6.6
130°-140°	373.3	7.1
140°-150°	358.1	6.8
150°-160°	299.3	5.7
160°-170°	199.1	3.8
170°-180°	69.7	1.3
0°-30°	737.4	13.9
0°-40°	1208.8	22.9
0°-60°	2176.4	41.2
0°-90°	2995.8	56.7
90°-120°	642.6	12.2
90°-150°	1722.2	32.6
90°-180°	2290.0	43.3
0°-180°	5286.2	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°	19	68	118	151	162	13
95°	48	89	136	165	176	49
105°	142	165	206	233	244	152
115°	255	266	298	319	327	252
125°	366	367	391	410	416	327
135°	469	473	480	495	501	363
145°	569	570	570	576	579	356
155°	650	650	650	652	650	299
165°	708	706	705	708	706	199
175°	736	734	733	736	733	70
180°	738	738	738	738	738	



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**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	41.7	51.7	61.6	71.5	81.8	92.3	102.9	113.4	124.0	131.0
90°	18.7	29.6	40.4	51.3	62.1	73.1	84.3	95.5	106.7	117.9	125.5
92.5°	28.4	38.5	48.6	58.7	68.8	79.3	90.2	101.0	111.9	122.8	129.9
95°	48.0	57.0	65.9	74.9	83.8	93.6	104.2	114.7	125.3	135.9	142.6
97.5°	72.3	79.9	87.6	95.2	102.8	112.0	122.6	133.2	143.9	154.5	161.1
100°	91.5	98.2	104.9	111.5	118.2	126.7	137.0	147.4	157.7	168.1	174.7
102.5°	112.5	118.1	123.7	129.3	134.9	142.7	152.8	162.9	172.9	183.0	189.6
105°	142.5	147.3	152.2	157.0	161.9	168.9	178.2	187.4	196.7	205.9	212.2
107.5°	175.9	179.9	184.0	188.0	192.0	198.2	206.6	214.9	223.3	231.6	237.8
110°	197.9	201.4	205.0	208.6	212.1	218.0	226.1	234.3	242.4	250.6	255.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	220.7	223.7	226.7	229.7	232.7	238.0	245.7	253.3	261.0	268.7	273.9
115°	255.1	257.2	259.3	261.4	263.6	268.3	275.6	282.9	290.2	297.5	302.6
117.5°	288.4	289.8	291.1	292.5	293.9	298.0	304.9	311.7	318.6	325.5	330.0
120°	309.9	311.1	312.3	313.5	314.7	318.6	325.1	331.5	338.0	344.5	348.6
122.5°	333.2	333.5	333.8	334.2	334.5	337.9	344.2	350.5	356.8	363.1	367.3
125°	366.4	366.2	366.0	365.7	365.5	368.3	374.0	379.8	385.6	391.4	395.6
127.5°	397.4	397.5	397.6	397.8	397.9	400.2	404.5	408.8	413.2	417.5	421.5
130°	418.4	418.5	418.7	418.8	419.0	420.9	424.7	428.5	432.3	436.1	440.1
132.5°	440.8	440.8	440.8	440.9	440.9	442.4	445.3	448.3	451.2	454.1	457.9
135°	469.2	470.0	470.8	471.5	472.3	473.5	475.1	476.8	478.5	480.1	483.6
137.5°	501.4	501.5	501.6	501.8	501.9	502.4	503.5	504.5	505.5	506.5	509.6
140°	522.9	522.9	522.9	522.9	522.9	523.1	523.3	523.5	523.8	524.0	526.9
142.5°	541.6	541.8	542.0	542.2	542.5	542.4	542.2	541.9	541.7	541.5	544.1
145°	568.6	568.8	569.1	569.4	569.6	569.8	570.0	570.1	570.2	570.3	571.6
147.5°	595.5	595.9	596.2	596.6	597.0	597.1	597.0	596.9	596.8	596.7	596.8
150°	611.9	612.2	612.4	612.7	613.0	613.1	613.1	613.1	613.1	613.1	613.1
152.5°	626.6	626.8	627.1	627.3	627.6	627.8	627.9	628.0	628.1	628.2	628.5
155°	650.2	650.2	650.2	650.2	650.2	650.1	650.0	649.9	649.8	649.6	650.1
157.5°	670.3	670.0	669.8	669.6	669.4	669.2	669.2	669.2	669.2	669.1	669.5
160°	682.1	682.0	681.9	681.8	681.6	681.5	681.4	681.3	681.1	681.0	681.4
162.5°	693.1	692.8	692.4	692.1	691.8	691.5	691.4	691.3	691.2	691.0	691.7
165°	707.8	707.4	707.0	706.7	706.3	706.0	705.7	705.5	705.2	705.0	705.7
167.5°	719.1	718.6	718.0	717.5	717.0	716.7	716.7	716.8	716.8	716.8	717.6
170°	725.5	724.9	724.2	723.6	722.9	722.7	722.8	722.9	723.1	723.2	724.0
172.5°	730.0	729.5	729.0	728.5	727.9	727.7	727.7	727.7	727.7	727.8	728.6
175°	736.3	735.7	735.1	734.4	733.8	733.4	733.3	733.2	733.0	732.9	733.8
177.5°	738.4	737.9	737.4	736.9	736.3	736.1	736.1	736.1	736.1	736.1	736.8
180°	737.5	737.5	737.5	737.5	737.5	737.5	737.5	737.5	737.5	737.5	737.5



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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°	138.0	145.0	152.0	156.6	158.7	160.8	163.0	165.1
90°	133.1	140.7	148.3	153.2	155.3	157.5	159.6	161.8
92.5°	137.0	144.1	151.3	155.9	157.9	159.9	162.0	164.0
95°	149.4	156.2	162.9	167.4	169.5	171.6	173.8	175.9
97.5°	167.8	174.4	181.1	185.4	187.5	189.5	191.5	193.6
100°	181.4	188.0	194.6	198.8	200.4	202.1	203.8	205.4
102.5°	196.1	202.7	209.2	213.4	215.4	217.3	219.3	221.2
105°	218.5	224.8	231.1	235.4	237.7	239.9	242.2	244.5
107.5°	243.9	250.1	256.3	260.2	261.9	263.6	265.2	266.9
110°	260.9	266.1	271.3	275.0	277.3	279.6	281.8	284.1





TEST NUMBER: P332593

CATALOG NUMBER: S124DIP-S795D590U835-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	279.1	284.2	289.4	293.0	295.0	297.0	298.9	300.9
115°	307.7	312.7	317.8	321.1	322.6	324.2	325.7	327.2
117.5°	334.4	338.9	343.4	346.5	348.1	349.8	351.4	353.0
120°	352.7	356.8	360.9	364.0	366.1	368.3	370.4	372.6
122.5°	371.6	375.9	380.2	383.0	384.3	385.5	386.7	388.0
125°	399.9	404.1	408.3	411.0	412.2	413.4	414.5	415.7
127.5°	425.5	429.5	433.5	436.2	437.6	439.0	440.4	441.8
130°	444.1	448.1	452.1	454.5	455.4	456.4	457.3	458.2
132.5°	461.7	465.5	469.4	471.9	473.1	474.3	475.5	476.7
135°	487.2	490.7	494.2	496.5	497.5	498.6	499.6	500.7
137.5°	512.7	515.8	519.0	521.1	522.4	523.7	524.9	526.2
140°	529.9	532.8	535.8	537.8	538.8	539.9	540.9	542.0
142.5°	546.8	549.5	552.1	554.0	554.9	555.9	556.9	557.8
145°	572.9	574.2	575.5	576.4	577.0	577.6	578.1	578.7
147.5°	596.9	597.0	597.1	597.4	598.0	598.7	599.3	599.9
150°	613.1	613.1	613.1	613.1	612.9	612.8	612.7	612.6
152.5°	628.8	629.1	629.4	629.4	629.1	628.7	628.4	628.1
155°	650.6	651.1	651.7	651.7	651.1	650.6	650.1	649.6
157.5°	669.9	670.3	670.7	670.6	670.2	669.8	669.3	668.9
160°	681.8	682.1	682.5	682.4	681.8	681.1	680.5	679.9
162.5°	692.4	693.1	693.8	693.8	693.2	692.5	691.9	691.3
165°	706.5	707.2	708.0	708.1	707.6	707.1	706.6	706.1
167.5°	718.3	719.1	719.9	719.8	719.1	718.3	717.5	716.7
170°	724.7	725.5	726.2	726.2	725.3	724.4	723.5	722.6
172.5°	729.5	730.4	731.2	731.2	730.3	729.4	728.5	727.7
175°	734.7	735.6	736.4	736.4	735.6	734.7	733.8	732.9
177.5°	737.5	738.2	738.9	738.9	738.1	737.3	736.4	735.6
180°	737.5	737.5	737.5	737.5	737.5	737.5	737.5	737.5

(END OF REPORT)