

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: P332585-840

Luminaire Tested: **S124DIP-S795D365U840-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332585-840  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124DIP-S795D365U840-4F0-1E-UDD-D4  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 365 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4592.2 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: Semi-Direct

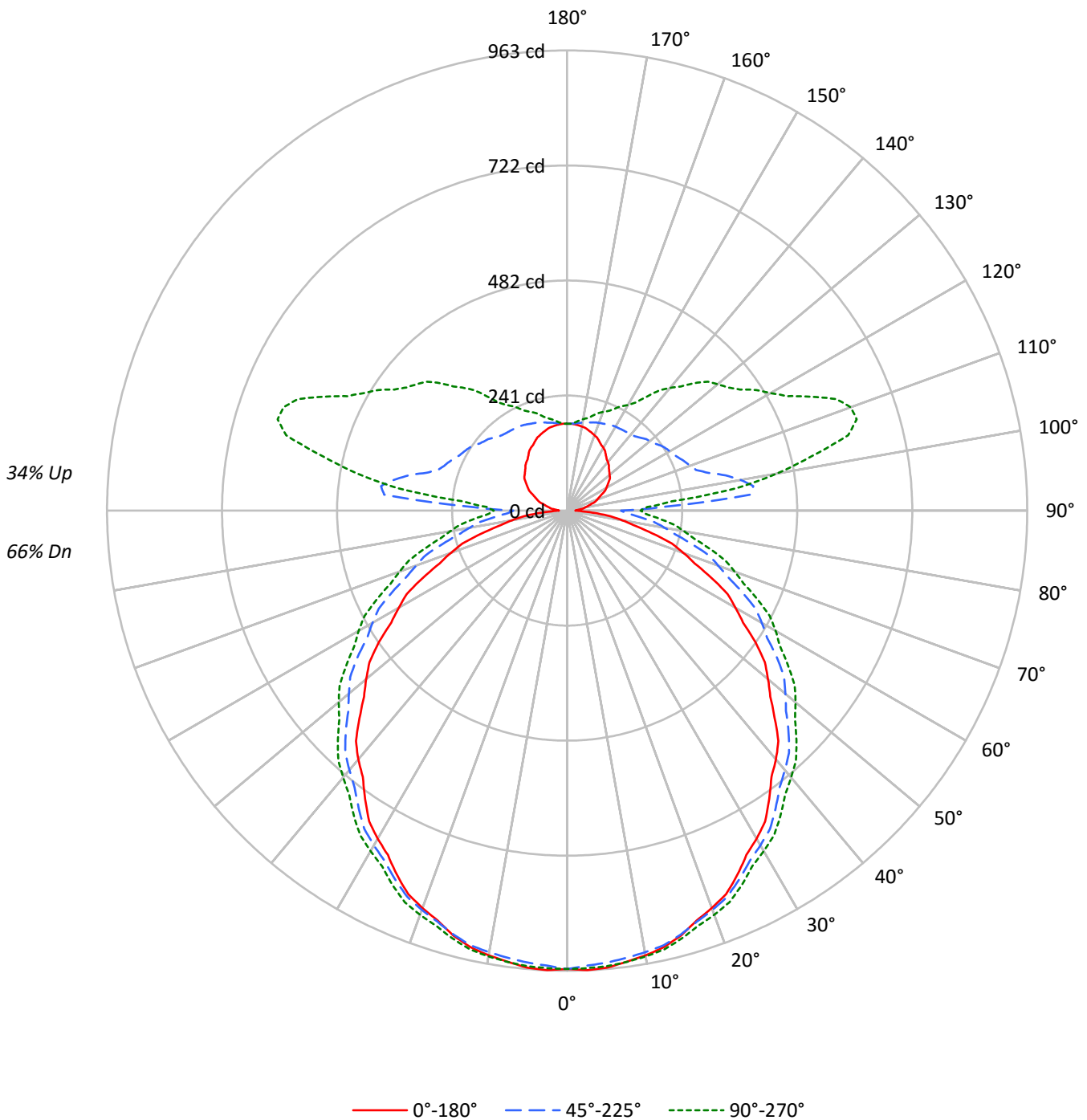
Input Watts (W): 35  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P332585-840

CATALOG NUMBER: S124DIP-S795D365U840-4F0-1E-UDD-D4

### Luminous Intensity Polar Plot





TEST NUMBER: P332585-840

CATALOG NUMBER: S124DIP-S795D365U840-4F0-1E-UDD-D4

**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	111	111	111	111	104	104	104	104	92	92	92	81	81	81	71	71	71	66
1	100	95	90	86	94	89	85	82	79	76	73	69	67	65	60	59	57	53
2	91	82	75	70	85	77	71	66	68	64	59	60	56	53	52	50	47	43
3	82	72	64	57	77	68	60	55	60	54	49	53	48	44	46	42	39	36
4	75	63	55	48	70	60	52	46	53	47	42	47	42	38	41	37	34	30
5	69	56	48	41	64	53	45	39	47	41	36	42	36	32	37	32	29	26
6	63	50	42	36	59	48	40	34	43	36	31	38	32	28	33	29	25	23
7	59	46	37	31	55	43	35	30	39	32	27	34	29	25	30	26	22	20
8	54	41	33	27	51	39	32	26	35	29	24	31	26	22	28	23	20	18
9	51	38	30	25	48	36	29	24	32	26	22	29	24	20	26	21	18	16
10	47	35	27	22	44	33	26	21	30	24	20	27	22	18	24	19	16	14

**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: P332585-840

CATALOG NUMBER: S124DIP-S795D365U840-4F0-1E-UDD-D4

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	90.8	2.0
10°-20°	260.3	5.7
20°-30°	393.5	8.6
30°-40°	476.1	10.4
40°-50°	503.4	11.0
50°-60°	473.7	10.3
60°-70°	393.1	8.6
70°-80°	276.1	6.0
80°-90°	157.1	3.4
90°-100°	223.9	4.9
100°-110°	341.7	7.4
110°-120°	290.7	6.3
120°-130°	231.7	5.0
130°-140°	182.8	4.0
140°-150°	133.3	2.9
150°-160°	92.1	2.0
160°-170°	54.2	1.2
170°-180°	17.6	0.4
0°-30°	744.6	16.2
0°-40°	1220.8	26.6
0°-60°	2197.9	47.9
0°-90°	3024.1	65.9
90°-120°	856.3	18.6
90°-150°	1404.1	30.6
90°-180°	1568.0	34.1
0°-180°	4592.2	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°	18	63	113	143	154	12
95°	26	87	384	265	219	24
105°	51	93	305	601	608	55
115°	80	110	259	474	564	80
125°	107	126	238	391	442	95
135°	124	147	216	329	377	96
145°	141	161	205	262	292	89
155°	160	172	199	226	235	74
165°	174	179	191	202	205	49
175°	181	182	183	186	185	17
180°	182	182	182	182	182	



TEST NUMBER: P332585-840

CATALOG NUMBER: S124DIP-S795D365U840-4F0-1E-UDD-D4

**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°	31.9	41.7	51.7	61.5	71.3	81.4	92.3	102.8	113.3	123.9	130.8
90°	17.6	27.8	38.4	48.4	58.3	68.2	80.6	90.8	101.8	112.8	119.4
92.5°	20.4	30.8	42.8	55.7	69.6	86.4	114.8	152.8	190.0	214.4	202.2
95°	25.8	34.7	46.2	58.7	75.1	99.0	139.8	208.0	303.2	384.4	399.0
97.5°	33.8	40.6	50.4	61.5	75.6	96.4	130.1	188.0	282.6	393.1	468.8
100°	39.0	45.1	53.8	64.3	77.4	96.5	126.8	176.5	258.6	368.6	466.5
102.5°	44.6	50.7	58.4	67.8	79.7	97.9	126.0	170.6	241.7	340.0	440.5
105°	51.4	57.3	63.8	72.9	84.1	101.2	127.2	165.6	224.5	305.1	394.9
107.5°	61.1	65.6	71.4	79.9	89.9	106.2	130.4	165.6	216.7	282.8	357.1
110°	66.8	70.8	75.9	83.6	93.3	108.9	132.9	166.2	213.9	274.0	337.6



TEST NUMBER: P332585-840

CATALOG NUMBER: S124DIP-S795D365U840-4F0-1E-UDD-D4

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	72.2	75.8	80.9	87.9	97.3	112.3	135.4	166.9	211.7	267.1	324.3
115°	80.0	83.2	87.9	93.5	102.5	117.0	139.0	167.9	208.8	259.2	309.5
117.5°	89.2	91.5	94.9	100.2	107.9	122.0	142.7	169.6	206.4	252.5	299.0
120°	94.6	96.0	99.3	103.9	110.7	124.5	145.0	170.5	204.9	248.2	292.6
122.5°	100.3	101.2	103.8	107.6	114.4	127.4	147.5	171.5	203.5	243.6	286.0
125°	106.7	108.0	109.8	113.5	120.1	132.9	151.7	174.1	202.6	237.8	276.6
127.5°	113.1	114.0	116.4	120.7	127.4	139.7	156.7	176.3	200.6	230.6	264.9
130°	116.0	117.2	119.8	124.9	131.5	143.6	159.6	177.3	199.3	226.0	257.4
132.5°	119.7	120.6	124.1	129.0	136.0	147.2	162.4	179.2	198.6	222.3	251.0
135°	123.8	125.3	128.9	134.9	142.4	152.5	166.0	180.5	196.8	215.6	240.1
137.5°	129.1	130.2	133.9	139.5	146.9	156.1	167.9	180.7	194.5	210.6	231.2
140°	132.8	133.6	137.3	143.1	150.4	159.0	169.9	181.6	193.9	207.7	226.2
142.5°	135.9	136.9	140.6	146.2	153.4	161.6	171.9	182.3	193.7	206.0	222.4
145°	141.4	142.2	145.5	150.3	156.8	164.5	173.8	183.5	193.8	204.9	217.7
147.5°	147.7	147.8	150.7	155.6	161.0	167.9	176.6	185.1	194.2	203.6	213.9
150°	151.7	151.8	154.4	158.4	163.6	170.3	178.1	185.9	194.2	202.7	211.7
152.5°	154.5	154.6	157.3	161.3	166.0	172.3	179.3	186.5	193.6	201.3	209.3
155°	159.6	159.9	162.1	165.6	169.6	174.9	181.0	187.0	192.8	199.1	205.9
157.5°	164.6	164.6	166.6	169.4	172.8	177.0	182.2	187.0	191.8	196.9	202.5
160°	167.7	167.7	169.2	171.7	174.5	178.4	182.8	187.0	191.0	195.2	199.9
162.5°	170.6	170.4	171.5	173.7	176.2	179.4	183.3	187.0	190.1	193.5	197.6
165°	173.8	173.8	174.5	176.3	178.1	180.3	183.5	186.3	188.4	191.0	193.8
167.5°	177.0	176.6	177.0	178.3	179.4	181.1	183.4	185.4	186.7	188.3	190.4
170°	178.4	178.1	178.4	179.6	180.3	181.3	183.1	184.9	185.6	186.6	188.1
172.5°	179.9	179.6	179.6	180.4	180.8	181.6	182.8	184.3	184.5	184.9	186.1
175°	181.3	181.0	181.0	181.3	181.7	181.7	182.4	183.5	183.1	183.1	183.8
177.5°	182.0	181.7	181.4	181.7	181.7	181.7	182.0	182.5	182.0	182.0	182.3
180°	181.7	181.7	181.7	181.7	181.7	181.7	181.7	181.7	181.7	181.7	181.7



TEST NUMBER: P332585-840

CATALOG NUMBER: S124DIP-S795D365U840-4F0-1E-UDD-D4

**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°	137.8	144.8	151.8	156.3	158.4	160.7	162.7	164.8
90°	126.6	133.9	141.2	145.6	147.8	150.2	151.7	153.6
92.5°	184.7	174.1	170.1	167.2	165.0	164.9	165.6	167.5
95°	370.8	321.9	280.5	250.2	234.9	226.0	221.7	219.2
97.5°	490.1	475.7	447.1	413.9	390.4	371.0	362.3	357.0
100°	524.9	538.6	527.6	505.1	475.7	455.7	446.7	445.5
102.5°	518.3	560.0	571.3	564.3	547.1	533.2	523.8	523.4
105°	482.6	550.3	591.6	610.2	612.8	611.9	608.7	608.5
107.5°	435.4	507.1	562.6	598.2	617.6	627.4	632.8	635.4
110°	406.7	473.8	531.1	574.1	601.4	618.2	626.5	631.7





TEST NUMBER: P332585-840

CATALOG NUMBER: S124DIP-S795D365U840-4F0-1E-UDD-D4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	384.0	443.8	498.1	541.0	571.6	591.7	602.6	609.7
115°	359.4	408.5	455.6	493.2	523.1	546.2	559.3	563.8
117.5°	343.5	384.8	422.6	455.0	481.1	501.0	514.4	518.6
120°	334.9	372.7	406.2	434.8	457.1	474.6	485.8	491.7
122.5°	327.1	364.0	394.7	420.1	439.1	454.2	463.7	469.4
125°	315.4	350.6	379.8	402.4	418.1	429.9	438.1	441.7
127.5°	301.3	335.0	363.9	385.5	401.4	412.2	419.6	423.3
130°	291.3	323.9	352.3	374.2	390.2	400.6	407.8	411.3
132.5°	281.6	312.1	339.9	361.6	377.4	388.9	395.8	399.3
135°	266.4	293.5	319.0	339.5	355.3	366.7	373.8	377.4
137.5°	253.4	276.4	298.3	316.8	331.3	342.3	348.2	352.0
140°	245.7	265.6	284.8	301.8	315.6	324.6	330.8	334.9
142.5°	239.2	256.7	273.2	288.1	300.1	308.4	313.9	316.9
145°	230.6	244.2	256.3	267.5	277.3	284.4	288.9	291.6
147.5°	223.5	233.3	242.1	250.3	257.7	263.7	267.1	268.5
150°	220.3	228.4	235.6	242.0	247.7	252.4	254.5	254.8
152.5°	217.1	224.2	230.8	236.0	240.9	244.6	245.9	246.3
155°	212.4	218.0	223.4	227.7	231.3	234.1	235.2	235.2
157.5°	207.3	212.1	216.6	220.0	222.7	224.9	225.5	225.5
160°	204.2	208.0	212.0	214.9	217.0	219.1	219.5	219.5
162.5°	201.1	204.4	207.4	210.1	211.6	213.7	214.1	213.8
165°	196.6	198.8	201.3	203.1	204.5	205.9	205.6	205.2
167.5°	192.5	194.1	196.1	197.1	197.8	198.8	198.7	198.4
170°	189.9	191.0	192.4	193.5	194.2	194.5	194.2	194.2
172.5°	187.6	188.3	189.2	190.1	190.5	190.8	190.5	189.9
175°	184.5	184.9	185.6	185.6	185.6	186.3	185.6	184.9
177.5°	182.5	182.8	182.8	183.1	182.8	183.1	182.5	182.0
180°	181.7	181.7	181.7	181.7	181.7	181.7	181.7	181.7

(END OF REPORT)