

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: P331960-840

Luminaire Tested: **S123DIP-S775D365U840-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331960-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S775D365U840-4F0-1E-UDD-D4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 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: 4589.7 lumens
Efficiency: N/A
Efficacy: 131.1 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: Semi-Direct

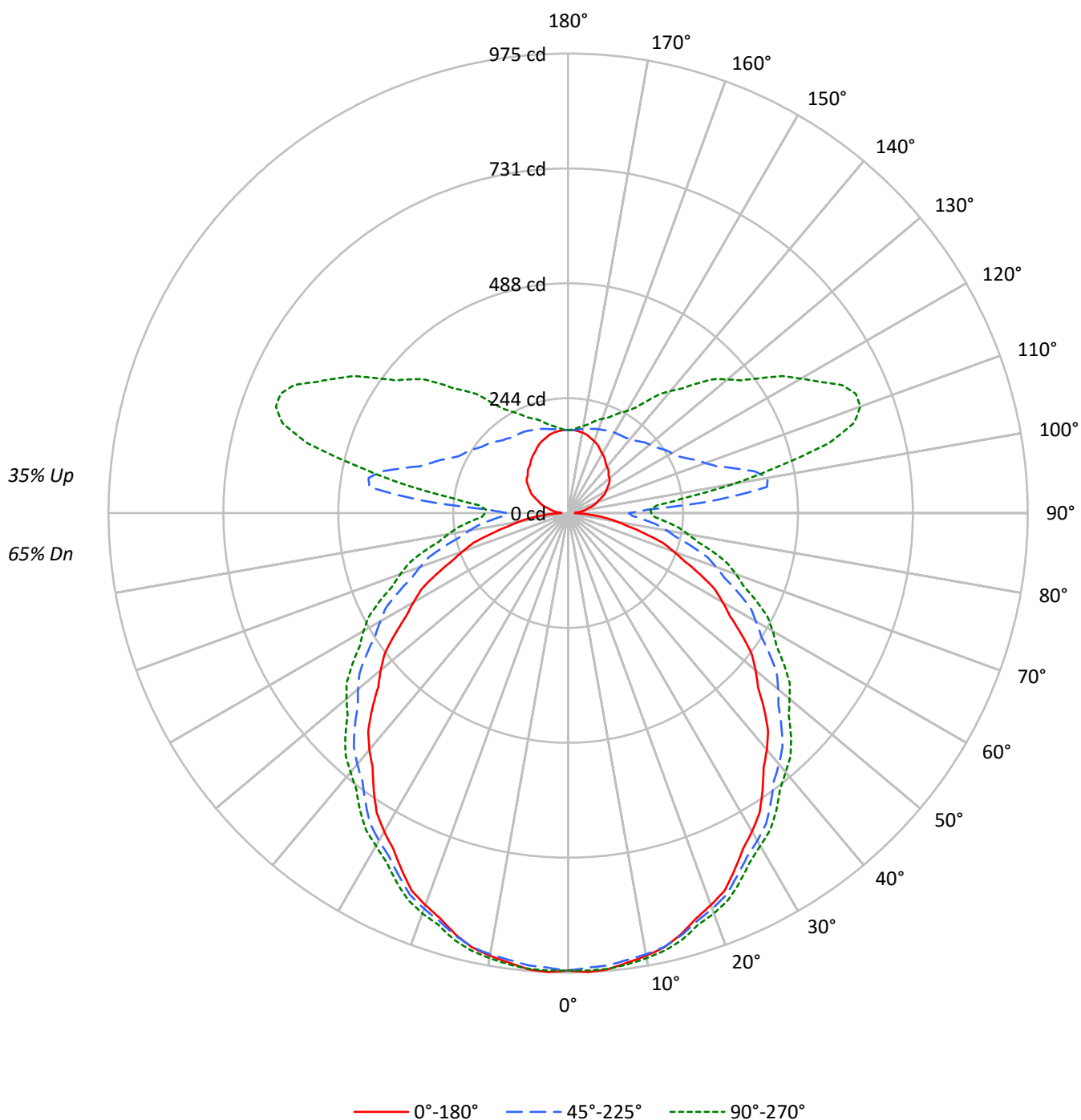
Input Watts (W): 35
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331960-840

CATALOG NUMBER: S123DIP-S775D365U840-4F0-1E-UDD-D4

Luminous Intensity Polar Plot



TEST NUMBER: P331960-840

CATALOG NUMBER: S123DIP-S775D365U840-4F0-1E-UDD-D4

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	0		
RCR																				
0	111	111	111	111	104	104	104	104	92	92	92	80	80	80	70	70	70	65		
1	100	95	90	86	94	89	85	82	78	75	73	69	66	64	60	58	56	52		
2	90	82	75	69	84	77	71	66	68	63	59	60	56	53	52	49	46	43		
3	82	72	64	57	77	67	60	54	60	54	49	52	48	44	45	42	39	35		
4	75	63	55	48	70	60	52	46	53	46	42	46	41	37	40	36	33	30		
5	69	56	48	41	64	53	45	39	47	41	36	41	36	32	36	32	29	26		
6	63	50	42	36	59	48	40	34	42	36	31	37	32	28	33	29	25	22		
7	59	46	37	31	55	43	35	30	38	32	27	34	29	25	30	26	22	20		
8	54	41	33	28	51	39	32	26	35	29	24	31	26	22	27	23	20	18		
9	51	38	30	25	47	36	29	24	32	26	22	29	24	20	25	21	18	16		
10	47	35	27	22	44	33	26	21	30	24	20	27	21	18	24	19	16	14		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10449	10449	10449
5°	10481	10185	10191
10°	10387	9951	9901
15°	10253	9685	9584
20°	10061	9380	9236
25°	9826	9030	8869
30°	9583	8714	8498
35°	9312	8382	8201
40°	9054	8079	7884
45°	8767	7788	7630
50°	8484	7501	7350
55°	8172	7206	7099
60°	7867	6907	6840
65°	7553	6588	6534
70°	7082	6231	6219
75°	6487	5819	5899
80°	5804	5417	5533
85°	5167	5142	5320

TEST NUMBER: P331960-840

CATALOG NUMBER: S123DIP-S775D365U840-4F0-1E-UDD-D4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.0	2.0
10°-20°	262.3	5.7
20°-30°	392.3	8.5
30°-40°	468.5	10.2
40°-50°	490.2	10.7
50°-60°	460.0	10.0
60°-70°	384.2	8.4
70°-80°	274.9	6.0
80°-90°	165.3	3.6
90°-100°	201.0	4.4
100°-110°	353.4	7.7
110°-120°	323.8	7.1
120°-130°	246.8	5.4
130°-140°	184.8	4.0
140°-150°	131.0	2.9
150°-160°	89.4	1.9
160°-170°	52.5	1.1
170°-180°	17.1	0.4
0°-30°	746.7	16.3
0°-40°	1215.2	26.5
0°-60°	2165.4	47.2
0°-90°	2989.9	65.1
90°-120°	878.1	19.1
90°-150°	1440.8	31.4
90°-180°	1600.0	34.9
0°-180°	4589.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	971	971	971	971	971	
5°	972	969	963	971	971	92
15°	925	928	927	937	937	260
25°	835	846	849	862	863	385
35°	719	736	750	765	770	450
45°	588	613	640	659	668	453
55°	448	483	521	549	558	401
65°	310	351	398	428	440	306
75°	168	218	271	304	318	180
85°	52	105	161	195	207	54
90°	14	70	128	164	176	10
95°	24	93	316	198	190	22
105°	50	96	366	610	572	53
115°	78	111	276	562	642	78
125°	105	125	239	426	499	93
135°	121	144	215	337	390	94
145°	137	156	199	259	288	86
155°	154	167	193	219	229	71
165°	169	174	185	196	199	48
175°	176	176	177	180	180	17
180°	176	176	176	176	176	

TEST NUMBER: P331960-840

CATALOG NUMBER: S123DIP-S775D365U840-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7
2.5°	974.9	974.3	973.8	973.2	972.7	971.6	970.2	968.7	967.1	965.6	967.1
5°	971.8	971.3	970.8	970.4	969.9	969.0	967.6	966.1	964.7	963.3	965.2
7.5°	962.2	962.3	962.4	962.5	962.6	962.0	960.6	959.3	957.9	956.5	958.9
10°	953.8	954.2	954.7	955.2	955.6	955.3	954.1	953.0	951.8	950.6	953.0
12.5°	943.6	944.3	944.9	945.6	946.2	946.2	945.4	944.6	943.8	943.0	945.1
15°	925.2	925.9	926.7	927.4	928.1	928.3	928.1	927.9	927.6	927.4	929.7
17.5°	902.0	903.4	904.8	906.2	907.6	908.3	908.2	908.1	908.0	907.9	910.0
20°	885.0	886.5	887.9	889.3	890.7	891.6	892.1	892.6	893.0	893.5	895.6
22.5°	867.3	868.7	870.1	871.5	872.9	873.9	874.6	875.3	876.0	876.6	879.3
25°	835.4	837.7	840.0	842.4	844.8	846.3	847.0	847.7	848.4	849.1	852.1
27.5°	803.2	805.9	808.6	811.2	814.0	816.0	817.5	819.0	820.5	822.0	824.7
30°	780.3	783.5	786.5	789.5	792.5	795.1	796.9	798.8	800.7	802.5	805.4
32.5°	755.0	758.4	761.8	765.3	768.7	771.6	774.1	776.6	779.0	781.4	784.5
35°	719.0	722.8	726.6	730.3	734.1	737.5	740.5	743.6	746.7	749.7	753.3
37.5°	681.0	685.2	689.4	693.7	697.9	701.9	705.7	709.4	713.2	716.9	720.9
40°	655.6	659.8	664.1	668.3	672.5	677.0	681.7	686.4	691.1	695.8	699.7
42.5°	627.6	632.9	638.0	643.2	648.3	653.4	658.2	663.2	668.0	673.0	677.3
45°	587.9	593.6	599.2	604.8	610.5	616.2	622.1	627.9	633.9	639.7	644.2
47.5°	546.2	552.7	559.1	565.4	571.8	578.3	585.1	591.8	598.5	605.2	610.3
50°	519.2	525.7	532.3	539.0	545.5	552.4	559.8	567.0	574.3	581.6	586.9
52.5°	490.4	497.4	504.3	511.3	518.3	525.7	533.8	541.8	549.9	557.8	563.5
55°	448.4	456.1	463.8	471.6	479.4	487.5	495.9	504.4	512.8	521.3	527.7
57.5°	407.3	415.4	423.4	431.5	439.7	448.3	457.6	466.9	476.1	485.3	491.7
60°	378.6	387.0	395.5	403.9	412.4	421.4	431.1	440.7	450.3	460.0	466.6
62.5°	351.4	360.1	368.8	377.4	386.1	395.5	405.7	415.9	426.1	436.3	442.8
65°	309.8	319.0	328.1	337.3	346.5	356.2	366.6	376.9	387.3	397.6	404.7
67.5°	267.5	277.2	287.0	296.7	306.4	316.6	327.1	337.6	348.1	358.7	366.4
70°	237.9	248.0	258.1	268.2	278.3	289.0	300.3	311.5	322.9	334.2	341.6
72.5°	210.9	221.0	231.1	241.2	251.3	262.2	273.8	285.5	297.1	308.7	316.5
75°	168.1	179.2	190.3	201.3	212.3	223.7	235.4	247.2	258.9	270.7	278.4
77.5°	130.9	142.1	153.2	164.3	175.4	186.9	198.8	210.7	222.5	234.3	242.5
80°	104.7	116.2	127.7	139.3	150.8	162.6	174.8	187.0	199.2	211.5	219.4
82.5°	81.8	93.5	105.2	116.9	128.7	140.7	153.1	165.5	177.9	190.4	198.3
85°	51.8	63.5	75.3	87.1	98.8	110.9	123.4	135.8	148.2	160.8	168.7
87.5°	28.3	40.1	52.0	63.9	75.7	87.7	99.9	112.1	124.3	136.5	144.4
90°	14.4	26.7	38.9	51.5	63.7	76.1	89.3	102.3	115.3	128.5	136.0
92.5°	17.4	29.9	43.2	56.5	69.8	86.1	107.3	134.4	161.3	167.6	161.9
95°	23.7	34.0	47.1	62.3	80.8	105.0	146.8	211.6	281.6	316.3	283.7
97.5°	31.1	39.7	51.0	64.6	82.0	106.6	146.6	217.6	326.2	425.1	454.9
100°	36.0	43.8	53.8	66.3	82.4	105.5	141.3	204.9	309.6	429.9	507.1
102.5°	41.1	48.5	57.5	69.0	83.4	104.9	137.9	193.4	287.6	406.3	504.6
105°	49.9	56.6	64.3	74.2	86.6	105.6	135.0	181.9	259.4	366.2	475.2
107.5°	58.2	64.0	70.9	79.9	91.0	108.5	135.0	175.1	239.1	330.1	429.4
110°	64.1	69.5	75.4	83.6	93.9	110.7	136.2	172.7	229.9	309.6	401.0

TEST NUMBER: P331960-840

CATALOG NUMBER: S123DIP-S775D365U840-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	70.4	75.0	80.3	87.7	97.1	113.1	137.1	171.3	222.4	293.7	375.0
115°	78.5	82.7	87.7	94.0	102.9	118.2	140.3	170.5	215.3	275.5	342.8
117.5°	87.3	90.7	94.2	99.3	107.8	121.5	142.9	170.3	209.0	261.3	320.2
120°	92.7	95.0	98.0	102.7	110.7	124.0	144.6	171.0	206.2	253.9	307.8
122.5°	98.2	99.9	102.2	106.7	113.8	127.2	147.2	171.8	204.3	247.6	296.8
125°	104.9	105.6	107.8	111.7	118.5	131.5	150.8	173.3	201.6	238.6	281.8
127.5°	110.8	111.6	114.0	117.9	125.0	137.4	155.1	174.9	199.8	231.1	267.7
130°	114.5	115.3	118.4	122.4	129.7	141.5	157.9	176.2	198.7	226.0	259.3
132.5°	116.5	117.9	121.3	126.3	133.8	145.0	160.3	177.3	197.2	221.5	251.3
135°	121.3	122.5	126.2	131.3	138.6	149.4	163.0	177.7	194.6	214.7	239.9
137.5°	125.8	127.1	130.8	136.3	143.5	153.1	165.2	178.2	192.4	208.8	230.1
140°	128.2	129.9	133.5	139.2	146.3	155.6	166.6	178.0	190.9	205.1	224.0
142.5°	131.5	132.8	136.5	141.5	148.5	156.7	166.9	177.5	188.9	201.2	217.9
145°	137.0	137.8	140.9	145.9	151.8	159.9	169.2	178.7	188.7	199.4	212.8
147.5°	141.6	142.2	145.3	150.0	155.8	162.8	171.3	180.0	188.7	198.1	208.4
150°	145.2	145.6	148.5	153.1	158.0	164.5	172.7	180.3	188.7	197.0	205.9
152.5°	149.0	149.1	151.9	155.9	160.4	166.5	173.6	180.8	187.9	195.6	203.6
155°	154.5	154.5	156.6	160.3	164.2	169.2	175.2	181.0	187.0	193.1	200.2
157.5°	159.0	159.3	161.0	164.1	167.4	171.3	176.1	181.3	185.8	190.9	196.3
160°	162.4	162.4	163.8	166.6	169.2	172.7	177.0	181.3	185.2	189.1	193.8
162.5°	164.9	164.9	166.1	168.3	170.6	173.6	177.3	181.0	184.1	187.4	191.2
165°	168.7	168.4	169.2	171.0	172.4	174.9	177.7	180.3	182.4	184.9	187.7
167.5°	171.7	171.3	171.7	173.0	174.0	175.6	177.6	179.7	180.7	182.3	184.4
170°	173.4	172.7	173.1	174.1	174.9	175.6	177.3	178.7	179.6	180.6	182.4
172.5°	174.6	174.1	174.2	175.0	175.4	175.8	177.3	178.5	178.6	179.2	180.4
175°	175.9	175.6	175.2	175.9	175.9	176.3	177.0	177.7	177.3	177.3	178.0
177.5°	176.6	176.3	176.0	176.3	176.3	176.3	176.6	177.1	176.6	176.3	176.6
180°	176.3	176.3	176.3	176.3	176.3	176.3	176.3	176.3	176.3	176.3	176.3

TEST NUMBER: P331960-840

CATALOG NUMBER: S123DIP-S775D365U840-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	970.7	970.7	970.7	970.7	970.7	970.7	970.7	970.7
2.5°	968.7	970.2	971.6	972.3	972.1	971.9	971.7	971.6
5°	967.0	969.0	970.8	971.6	971.4	971.2	971.0	970.7
7.5°	961.2	963.6	965.9	966.9	966.6	966.4	966.1	965.8
10°	955.3	957.7	960.0	961.0	960.5	960.0	959.6	959.1
12.5°	947.4	949.5	951.6	952.5	952.0	951.6	951.1	950.6
15°	932.0	934.4	936.8	937.8	937.6	937.4	937.1	936.9
17.5°	912.1	914.2	916.4	917.3	917.0	916.6	916.3	915.9
20°	897.8	899.9	902.0	903.1	903.4	903.6	903.8	904.1
22.5°	881.9	884.6	887.3	888.6	888.5	888.3	888.2	888.0
25°	855.3	858.3	861.3	862.8	862.8	862.8	862.8	862.8
27.5°	827.3	829.9	832.5	833.9	834.1	834.4	834.6	834.8
30°	808.2	811.0	813.9	815.3	815.3	815.3	815.3	815.3
32.5°	787.4	790.4	793.5	795.3	795.8	796.4	796.9	797.5
35°	756.8	760.3	763.8	766.1	767.0	767.9	768.8	769.8
37.5°	724.9	728.9	732.9	735.3	736.0	736.8	737.5	738.3
40°	703.8	707.7	711.8	714.2	715.2	716.1	717.0	718.0
42.5°	681.7	686.0	690.4	693.3	694.6	695.9	697.2	698.5
45°	648.6	653.1	657.6	660.8	662.7	664.5	666.4	668.3
47.5°	615.3	620.4	625.4	628.6	630.1	631.6	633.0	634.4
50°	592.4	597.7	603.2	606.7	608.3	610.0	611.7	613.3
52.5°	569.1	574.7	580.3	584.1	586.1	588.1	590.2	592.2
55°	534.0	540.4	546.6	550.8	552.7	554.5	556.4	558.4
57.5°	498.2	504.5	510.9	515.2	517.5	519.7	521.8	524.0
60°	473.1	479.7	486.3	490.9	493.4	496.0	498.7	501.2
62.5°	449.5	456.1	462.6	467.1	469.5	471.9	474.3	476.7
65°	411.7	418.7	425.8	430.5	432.8	435.2	437.6	439.9
67.5°	374.1	381.8	389.5	394.4	396.3	398.3	400.3	402.2
70°	349.2	356.7	364.3	369.1	371.5	373.9	376.2	378.6
72.5°	324.2	331.8	339.6	344.7	347.0	349.3	351.6	354.1
75°	286.2	294.0	301.7	307.0	309.8	312.7	315.5	318.3
77.5°	250.6	258.8	267.0	272.2	274.4	276.5	278.7	280.8
80°	227.4	235.4	243.5	248.6	251.0	253.3	255.7	258.0
82.5°	206.3	214.3	222.3	227.4	229.8	232.2	234.5	236.8
85°	176.7	184.7	192.7	197.8	200.2	202.6	204.9	207.2
87.5°	152.5	160.6	168.6	173.9	176.2	178.6	181.1	183.3
90°	144.4	152.7	161.1	166.9	169.0	171.7	174.4	176.3
92.5°	158.3	160.0	165.0	168.1	169.7	170.7	173.2	174.7
95°	247.7	213.6	202.0	194.0	189.6	188.6	188.5	189.5
97.5°	431.3	374.6	335.6	297.5	273.6	259.8	252.6	251.9
100°	526.3	504.3	469.4	423.2	389.5	365.9	354.3	357.0
102.5°	554.3	560.0	542.3	514.6	489.0	470.7	461.4	455.6
105°	556.4	598.6	612.0	607.1	592.8	581.4	572.0	572.4
107.5°	520.3	584.5	622.1	639.0	641.4	638.8	637.0	635.8
110°	488.9	560.7	611.7	640.7	652.6	657.3	658.4	659.6

TEST NUMBER: P331960-840

CATALOG NUMBER: S123DIP-S775D365U840-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	456.9	529.9	586.2	622.3	642.7	653.6	658.3	660.6
115°	414.5	482.3	540.4	583.0	611.7	629.2	638.3	642.0
117.5°	381.5	440.8	493.4	536.6	566.4	586.2	598.3	602.6
120°	363.6	417.2	465.3	504.9	534.7	556.4	566.6	570.4
122.5°	348.4	397.2	442.1	479.0	505.7	525.3	536.4	540.8
125°	327.4	371.2	410.4	442.3	466.8	484.1	494.6	498.8
127.5°	308.2	347.6	383.1	412.2	434.1	449.2	458.9	462.7
130°	295.9	332.5	365.9	393.0	413.4	427.7	436.6	440.8
132.5°	284.2	318.0	349.2	375.3	394.7	409.1	417.3	420.9
135°	268.1	297.7	325.1	348.1	366.8	378.7	386.3	389.9
137.5°	253.2	277.7	301.3	321.4	337.3	349.4	356.0	358.8
140°	244.3	266.0	286.7	304.4	319.1	330.3	337.2	338.0
142.5°	235.3	254.1	272.1	287.6	300.3	310.3	316.7	317.5
145°	226.1	239.7	253.1	264.8	274.7	283.1	286.9	288.5
147.5°	218.6	228.6	238.3	246.4	254.1	259.9	263.5	264.7
150°	214.1	222.4	229.8	236.8	242.7	247.0	249.6	250.1
152.5°	211.0	218.0	224.7	230.4	234.7	238.4	239.7	239.8
155°	206.3	212.0	217.3	221.6	224.8	227.7	228.4	228.7
157.5°	201.3	206.0	210.2	213.6	216.3	218.4	219.0	218.9
160°	198.4	202.4	205.9	208.4	210.9	213.1	213.1	212.7
162.5°	195.0	198.3	201.7	203.9	205.5	207.3	207.3	207.0
165°	190.6	192.7	195.2	197.0	198.4	199.9	199.4	199.4
167.5°	186.7	188.3	189.8	191.1	191.7	192.7	192.4	192.4
170°	184.1	185.2	186.6	187.3	187.7	188.4	188.0	188.0
172.5°	181.9	182.7	183.8	184.2	184.3	185.0	184.4	184.1
175°	178.7	179.2	179.9	179.9	179.9	180.3	179.9	179.6
177.5°	176.8	177.1	177.4	177.4	177.1	177.4	176.8	176.8
180°	176.3	176.3	176.3	176.3	176.3	176.3	176.3	176.3

(END OF REPORT)