

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: P331397

Luminaire Tested: **S122DIP-S865D725U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331397  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122DIP-S865D725U835-4F0-1E-UDD-D1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 865 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 725 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6086.7 lumens  
Efficiency: N/A  
Efficacy: 111.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

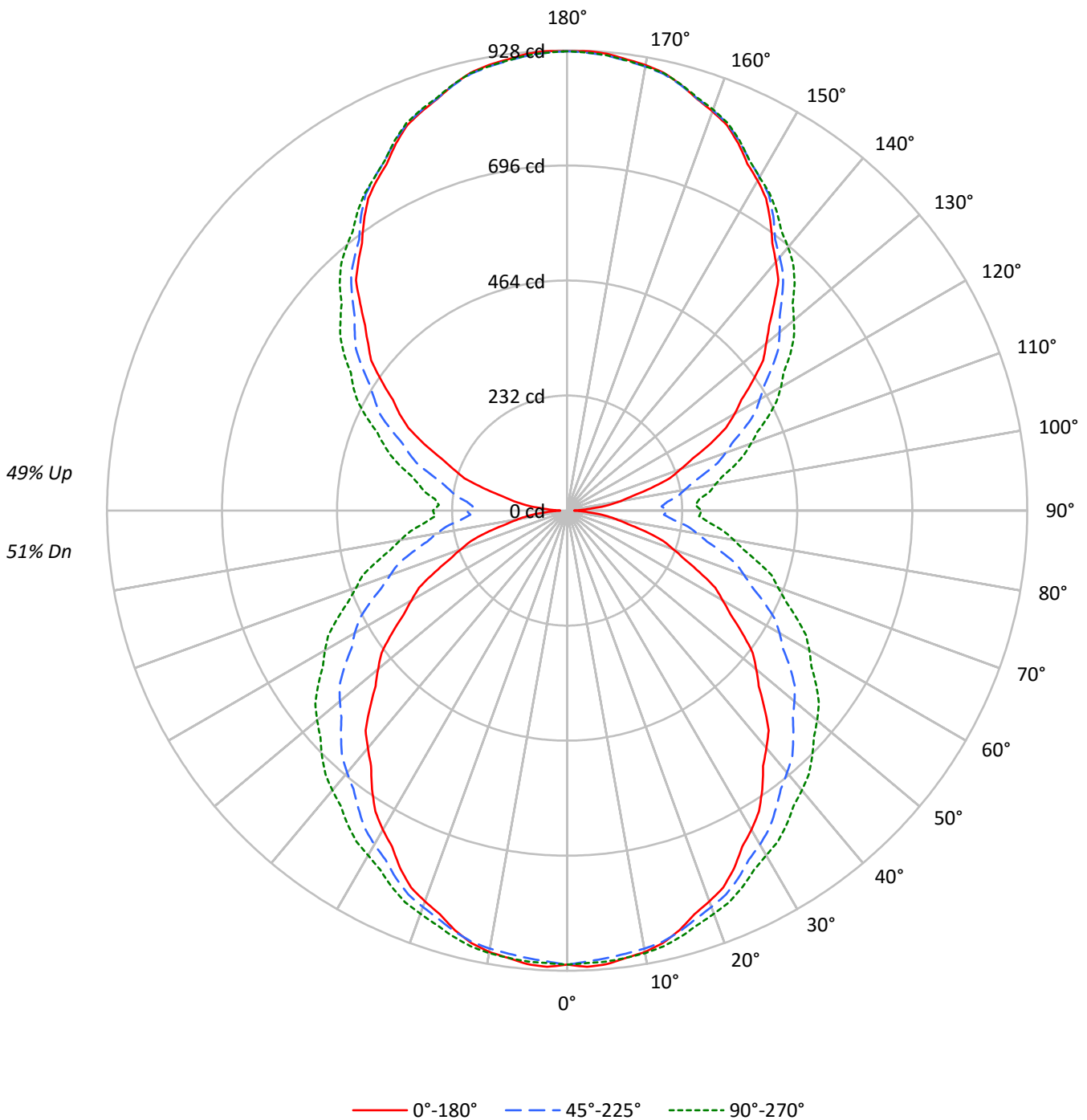
Input Watts (W): 54.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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									70									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	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51	51	51	51	51	51	51														
1	96	91	87	83	89	84	81	77	71	68	66	59	57	55	48	47	45	40	40	40	40	40	40	40														
2	87	79	72	67	80	73	67	62	62	57	53	51	48	45	41	39	37	32	32	32	32	32	32	32														
3	79	69	61	55	73	64	57	51	54	48	44	45	41	37	36	33	31	27	27	27	27	27	27	27														
4	72	61	52	46	66	56	49	43	47	42	37	39	35	31	32	29	26	22	22	22	22	22	22	22														
5	66	54	45	39	61	50	42	36	42	36	32	35	31	27	29	25	22	19	19	19	19	19	19	19														
6	61	48	40	34	56	45	37	31	38	32	27	32	27	23	26	22	20	17	17	17	17	17	17	17														
7	56	43	35	29	52	40	33	27	34	28	24	29	24	21	24	20	17	15	15	15	15	15	15	15														
8	52	39	31	26	48	37	29	24	31	25	21	26	22	18	22	18	15	13	13	13	13	13	13	13														
9	48	36	28	23	45	33	26	22	29	23	19	24	20	16	20	16	14	12	12	12	12	12	12	12														
10	45	33	25	20	42	31	24	19	26	21	17	22	18	15	18	15	12	10	10	10	10	10	10	10														

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	14783	14783	14783
5°	14855	14230	14176
10°	14762	13809	13655
15°	14558	13364	13106
20°	14300	12888	12577
25°	14048	12428	12096
30°	13689	11955	11614
35°	13327	11498	11275
40°	12947	11110	10935
45°	12584	10762	10645
50°	12196	10448	10360
55°	11790	10109	10067
60°	11292	9759	9760
65°	10774	9347	9393
70°	10189	8905	8999
75°	9446	8470	8637
80°	8274	8029	8266
85°	7152	7646	7981



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.8	1.4
10°-20°	248.8	4.1
20°-30°	377.0	6.2
30°-40°	459.2	7.5
40°-50°	494.0	8.1
50°-60°	479.7	7.9
60°-70°	418.9	6.9
70°-80°	322.5	5.3
80°-90°	220.1	3.6
90°-100°	207.8	3.4
100°-110°	291.2	4.8
110°-120°	383.5	6.3
120°-130°	449.9	7.4
130°-140°	476.7	7.8
140°-150°	453.9	7.5
150°-160°	378.2	6.2
160°-170°	250.9	4.1
170°-180°	87.7	1.4
0°-30°	712.5	11.7
0°-40°	1171.7	19.3
0°-60°	2145.5	35.2
0°-90°	3107.0	51.0
90°-120°	882.5	14.5
90°-150°	2263.0	37.2
90°-180°	2980.0	49.0
0°-180°	6086.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	916	916	916	916	916	
5°	918	914	906	914	913	87
15°	876	878	878	890	889	247
25°	796	806	817	833	837	366
35°	686	709	734	762	772	429
45°	563	599	645	684	699	434
55°	431	480	548	594	613	385
65°	295	360	438	490	510	293
75°	163	238	322	377	397	173
85°	48	130	215	269	289	51
90°	14	101	202	252	271	11
95°	51	122	203	251	267	55
105°	175	217	286	332	349	185
115°	318	339	395	433	447	314
125°	458	466	505	537	549	409
135°	590	599	613	639	649	456
145°	714	720	725	733	737	446
155°	817	819	822	825	823	376
165°	889	888	888	893	890	251
175°	925	922	921	926	922	88
180°	926	926	926	926	926	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6
2.5°	920.9	920.2	919.5	918.8	918.1	916.9	915.2	913.6	911.9	910.3	911.5
5°	918.2	917.4	916.5	915.6	914.7	913.4	911.6	909.8	908.1	906.3	908.1
7.5°	910.0	909.4	908.8	908.3	907.7	906.7	905.3	904.0	902.6	901.3	903.4
10°	903.7	903.1	902.5	901.9	901.3	900.6	899.7	898.8	897.9	897.0	899.4
12.5°	893.0	893.2	893.3	893.4	893.5	893.2	892.6	891.9	891.3	890.6	893.0
15°	875.8	876.4	877.0	877.6	878.1	878.4	878.4	878.4	878.4	878.4	881.1
17.5°	853.5	854.7	856.0	857.2	858.4	859.5	860.5	861.4	862.4	863.3	866.1
20°	838.6	840.1	841.6	843.1	844.5	845.9	847.0	848.2	849.4	850.6	853.8
22.5°	822.7	824.4	826.1	827.8	829.5	831.2	832.9	834.5	836.2	837.8	841.1
25°	796.2	798.2	800.3	802.4	804.4	806.8	809.4	812.1	814.7	817.4	820.9
27.5°	764.3	767.7	771.0	774.4	777.8	781.0	784.1	787.3	790.4	793.5	798.0
30°	743.1	746.9	750.8	754.6	758.4	762.3	766.1	769.9	773.8	777.6	782.3
32.5°	719.7	724.0	728.3	732.7	737.0	741.4	745.9	750.5	755.0	759.5	765.0
35°	686.0	691.0	696.1	701.1	706.1	711.4	717.0	722.6	728.2	733.8	740.3
37.5°	649.4	655.2	661.0	666.7	672.5	679.0	686.3	693.6	700.8	708.1	715.3
40°	625.0	631.5	638.0	644.5	650.9	658.2	666.1	674.1	682.1	690.0	697.7
42.5°	601.6	608.1	614.6	621.1	627.6	635.4	644.5	653.7	662.8	672.0	680.3
45°	562.6	570.6	578.5	586.5	594.5	603.6	613.9	624.3	634.6	644.9	654.0
47.5°	524.1	532.8	541.5	550.2	558.8	569.2	581.3	593.4	605.5	617.6	627.1
50°	497.6	506.7	515.9	525.0	534.2	545.4	558.6	571.9	585.2	598.5	608.5
52.5°	472.1	481.7	491.4	501.0	510.6	522.4	536.4	550.3	564.3	578.3	588.5
55°	431.3	441.9	452.5	463.1	473.7	486.7	502.0	517.4	532.7	548.0	558.6
57.5°	390.9	402.9	414.9	426.8	438.8	452.6	468.2	483.9	499.5	515.1	526.6
60°	362.3	374.9	387.6	400.3	413.0	427.7	444.5	461.3	478.1	495.0	506.2
62.5°	336.8	349.9	363.1	376.2	389.4	404.4	421.2	438.0	454.8	471.6	483.5
65°	294.6	309.0	323.5	337.9	352.4	368.3	385.7	403.1	420.5	437.9	450.0
67.5°	255.8	270.9	286.0	301.1	316.2	332.7	350.5	368.3	386.1	403.9	416.1
70°	228.2	243.6	258.9	274.2	289.6	306.4	324.7	342.9	361.2	379.5	392.2
72.5°	202.8	218.6	234.4	250.2	266.0	283.1	301.7	320.2	338.7	357.2	369.7
75°	163.2	179.7	196.2	212.8	229.3	247.0	265.8	284.7	303.6	322.4	335.1
77.5°	125.0	142.3	159.6	176.8	194.1	212.3	231.5	250.7	269.8	289.0	301.6
80°	99.5	117.5	135.5	153.5	171.5	190.0	209.2	228.4	247.5	266.7	279.1
82.5°	78.3	96.0	113.8	131.5	149.3	167.9	187.3	206.7	226.1	245.5	257.9
85°	47.8	66.1	84.3	102.6	120.9	139.5	158.3	177.2	196.1	215.0	227.4
87.5°	26.2	44.2	62.1	80.1	98.1	116.9	136.6	156.2	175.9	195.5	207.5
90°	14.1	33.2	52.4	71.6	90.8	111.7	134.4	157.1	179.8	202.5	214.0
92.5°	26.1	43.6	61.0	78.5	95.9	114.2	133.3	152.3	171.4	190.5	202.1
95°	51.3	66.9	82.5	98.0	113.6	130.5	148.5	166.5	184.6	202.6	213.8
97.5°	83.5	97.4	111.3	125.1	139.0	154.7	172.4	190.0	207.6	225.3	236.2
100°	108.6	120.9	133.2	145.5	157.8	172.4	189.5	206.5	223.5	240.6	251.5
102.5°	133.8	144.8	155.9	167.0	178.1	192.0	208.7	225.4	242.1	258.8	269.6
105°	174.7	183.8	192.8	201.9	211.0	223.4	239.0	254.7	270.4	286.1	296.7
107.5°	217.3	224.9	232.5	240.1	247.7	258.8	273.5	288.2	302.9	317.6	327.6
110°	243.7	250.6	257.6	264.5	271.5	282.2	296.6	311.1	325.5	340.0	349.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	273.7	279.7	285.7	291.7	297.7	307.5	321.1	334.7	348.3	361.9	370.9
115°	318.0	322.3	326.5	330.8	335.1	343.7	356.6	369.6	382.5	395.4	404.1
117.5°	360.7	364.2	367.7	371.3	374.8	382.2	393.5	404.8	416.1	427.4	435.7
120°	390.1	392.7	395.3	397.8	400.4	406.9	417.3	427.7	438.1	448.5	456.8
122.5°	417.0	419.1	421.3	423.4	425.6	431.7	441.8	451.9	462.0	472.1	479.7
125°	457.6	459.1	460.7	462.3	463.8	469.1	478.0	486.9	495.8	504.7	512.2
127.5°	498.4	500.1	501.7	503.4	505.1	509.4	516.4	523.4	530.4	537.4	544.1
130°	524.0	526.0	527.9	529.9	531.9	535.8	541.6	547.5	553.3	559.1	565.9
132.5°	552.8	554.3	555.9	557.4	559.0	562.2	567.0	571.8	576.7	581.5	587.6
135°	589.9	591.8	593.7	595.6	597.5	600.1	603.4	606.7	610.0	613.3	619.4
137.5°	630.4	631.9	633.4	634.9	636.4	638.0	639.8	641.5	643.3	645.0	650.3
140°	654.8	656.0	657.3	658.6	659.9	661.2	662.7	664.1	665.6	667.0	671.8
142.5°	679.8	681.1	682.3	683.6	684.9	685.9	686.6	687.3	688.0	688.7	692.6
145°	714.4	715.6	716.9	718.1	719.3	720.4	721.5	722.5	723.5	724.6	726.5
147.5°	746.5	747.9	749.4	750.8	752.3	753.4	754.1	754.8	755.5	756.2	756.8
150°	768.4	769.4	770.4	771.5	772.5	773.4	774.1	774.8	775.5	776.2	776.7
152.5°	787.7	788.8	789.8	790.9	791.9	792.8	793.7	794.5	795.3	796.2	796.8
155°	816.8	817.3	817.9	818.4	818.9	819.4	819.9	820.5	821.0	821.5	822.4
157.5°	841.7	842.0	842.4	842.7	843.1	843.4	843.7	844.0	844.3	844.6	845.8
160°	856.7	857.0	857.4	857.7	858.1	858.3	858.5	858.7	858.9	859.0	860.1
162.5°	870.4	870.5	870.6	870.6	870.7	870.8	871.0	871.2	871.4	871.5	872.7
165°	888.7	888.6	888.4	888.2	888.0	887.9	887.9	887.9	887.9	887.9	889.2
167.5°	904.0	903.5	903.0	902.5	902.0	901.7	901.7	901.6	901.6	901.5	902.8
170°	912.2	911.7	911.1	910.6	910.1	909.7	909.6	909.4	909.2	909.0	910.3
172.5°	917.8	917.3	916.8	916.2	915.7	915.4	915.2	915.0	914.9	914.7	915.9
175°	924.7	924.2	923.6	923.1	922.6	922.2	921.8	921.5	921.1	920.8	922.0
177.5°	927.5	927.1	926.7	926.2	925.8	925.5	925.2	924.9	924.6	924.4	925.2
180°	926.2	926.2	926.2	926.2	926.2	926.2	926.2	926.2	926.2	926.2	926.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6
2.5°	912.6	913.8	915.0	915.4	914.9	914.4	913.9	913.5
5°	909.8	911.6	913.4	914.1	913.8	913.5	913.2	912.9
7.5°	905.5	907.6	909.8	910.7	910.4	910.1	909.8	909.5
10°	901.7	904.1	906.5	907.5	907.2	906.9	906.6	906.3
12.5°	895.4	897.7	900.1	901.1	900.8	900.5	900.2	899.9
15°	883.7	886.4	889.1	890.2	889.9	889.6	889.3	889.1
17.5°	868.9	871.6	874.4	875.8	875.8	875.8	875.8	875.8
20°	857.1	860.3	863.5	865.2	865.2	865.2	865.2	865.2
22.5°	844.3	847.6	850.8	852.7	853.1	853.6	854.1	854.6
25°	824.5	828.0	831.6	833.8	834.6	835.5	836.4	837.3
27.5°	802.5	807.0	811.4	814.0	814.7	815.3	816.0	816.6
30°	787.0	791.7	796.5	799.3	800.1	801.0	801.9	802.8
32.5°	770.4	775.8	781.2	784.8	786.3	787.9	789.5	791.1
35°	746.8	753.3	759.8	764.0	766.1	768.2	770.2	772.3
37.5°	722.4	729.6	736.8	741.5	743.7	745.9	748.1	750.3
40°	705.3	713.0	720.7	725.8	728.5	731.1	733.8	736.5
42.5°	688.7	697.1	705.5	711.0	713.6	716.3	718.9	721.6
45°	663.2	672.3	681.5	687.5	690.5	693.4	696.4	699.3
47.5°	636.7	646.2	655.8	662.2	665.4	668.7	671.9	675.2
50°	618.5	628.5	638.6	645.2	648.4	651.7	654.9	658.2
52.5°	598.8	609.1	619.3	626.2	629.7	633.2	636.6	640.1
55°	569.3	579.9	590.5	597.7	601.5	605.4	609.2	613.0
57.5°	538.0	549.4	560.9	568.6	572.4	576.3	580.2	584.1
60°	517.4	528.6	539.8	547.4	551.6	555.7	559.8	564.0
62.5°	495.4	507.3	519.2	527.2	531.0	534.9	538.8	542.7
65°	462.1	474.2	486.3	494.2	498.0	501.9	505.7	509.5
67.5°	428.3	440.5	452.8	460.9	464.9	468.9	472.9	476.9
70°	404.9	417.5	430.2	438.3	441.9	445.4	449.0	452.5
72.5°	382.1	394.5	407.0	415.3	419.6	423.8	428.1	432.3
75°	347.8	360.5	373.2	381.4	385.3	389.1	392.9	396.8
77.5°	314.3	326.9	339.5	347.9	352.0	356.1	360.3	364.4
80°	291.5	303.9	316.3	324.5	328.6	332.8	336.9	341.0
82.5°	270.3	282.6	295.0	303.2	307.1	310.9	314.8	318.7
85°	239.7	252.1	264.5	272.8	276.9	281.0	285.1	289.3
87.5°	219.4	231.4	243.3	251.2	255.0	258.8	262.6	266.5
90°	225.4	236.9	248.3	255.9	259.6	263.3	267.0	270.7
92.5°	213.7	225.3	237.0	244.6	248.1	251.7	255.3	258.9
95°	225.0	236.2	247.4	254.6	257.8	261.0	264.2	267.4
97.5°	247.1	258.0	268.9	276.1	279.6	283.0	286.4	289.9
100°	262.4	273.3	284.2	291.2	294.3	297.3	300.4	303.5
102.5°	280.4	291.2	302.0	309.0	312.0	315.1	318.2	321.2
105°	307.4	318.1	328.8	335.7	339.0	342.2	345.4	348.7
107.5°	337.7	347.7	357.8	364.0	366.4	368.9	371.3	373.8
110°	358.8	368.3	377.7	383.8	386.5	389.2	391.9	394.7





TEST NUMBER: P331397

CATALOG NUMBER: S122DIP-S865D725U835-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	380.0	389.0	398.0	403.9	406.8	409.7	412.5	415.4
115°	412.7	421.4	430.1	435.8	438.5	441.2	444.0	446.7
117.5°	444.0	452.3	460.6	466.0	468.5	471.0	473.5	475.9
120°	465.0	473.3	481.5	487.0	489.7	492.5	495.2	497.9
122.5°	487.4	495.0	502.6	507.6	509.9	512.3	514.7	517.1
125°	519.6	527.0	534.5	539.4	541.9	544.4	546.9	549.4
127.5°	550.8	557.4	564.1	568.5	570.5	572.6	574.6	576.6
130°	572.6	579.3	586.1	590.3	591.9	593.6	595.3	596.9
132.5°	593.7	599.8	605.8	609.8	611.6	613.4	615.2	617.0
135°	625.4	631.4	637.4	641.3	643.2	645.0	646.9	648.7
137.5°	655.6	660.9	666.2	669.5	670.8	672.1	673.4	674.7
140°	676.5	681.2	685.9	688.8	689.9	691.0	692.0	693.1
142.5°	696.5	700.4	704.3	706.7	707.6	708.4	709.2	710.1
145°	728.5	730.4	732.4	733.7	734.5	735.3	736.1	736.8
147.5°	757.4	758.0	758.6	759.0	759.0	759.1	759.1	759.2
150°	777.2	777.7	778.3	778.3	777.7	777.2	776.7	776.2
152.5°	797.5	798.2	798.8	798.8	798.2	797.5	796.8	796.2
155°	823.2	824.1	825.0	825.2	824.6	824.1	823.6	823.1
157.5°	847.0	848.2	849.4	849.5	848.7	847.9	847.0	846.2
160°	861.1	862.2	863.2	863.4	862.7	862.0	861.3	860.6
162.5°	873.9	875.1	876.3	876.4	875.6	874.8	873.9	873.1
165°	890.4	891.6	892.8	893.0	892.1	891.2	890.4	889.5
167.5°	904.0	905.2	906.4	906.6	905.7	904.8	903.9	903.0
170°	911.5	912.7	913.9	914.0	913.0	911.9	910.9	909.8
172.5°	917.1	918.3	919.5	919.6	918.6	917.5	916.5	915.5
175°	923.2	924.4	925.6	925.7	924.7	923.6	922.6	921.6
177.5°	926.0	926.9	927.7	927.7	926.9	926.0	925.2	924.4
180°	926.2	926.2	926.2	926.2	926.2	926.2	926.2	926.2

(END OF REPORT)