

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: P331356-940

Luminaire Tested: **SA2XXDIP-C675D725U940-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331356-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C675D725U940-4F0-1E-UDD-F4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 725 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

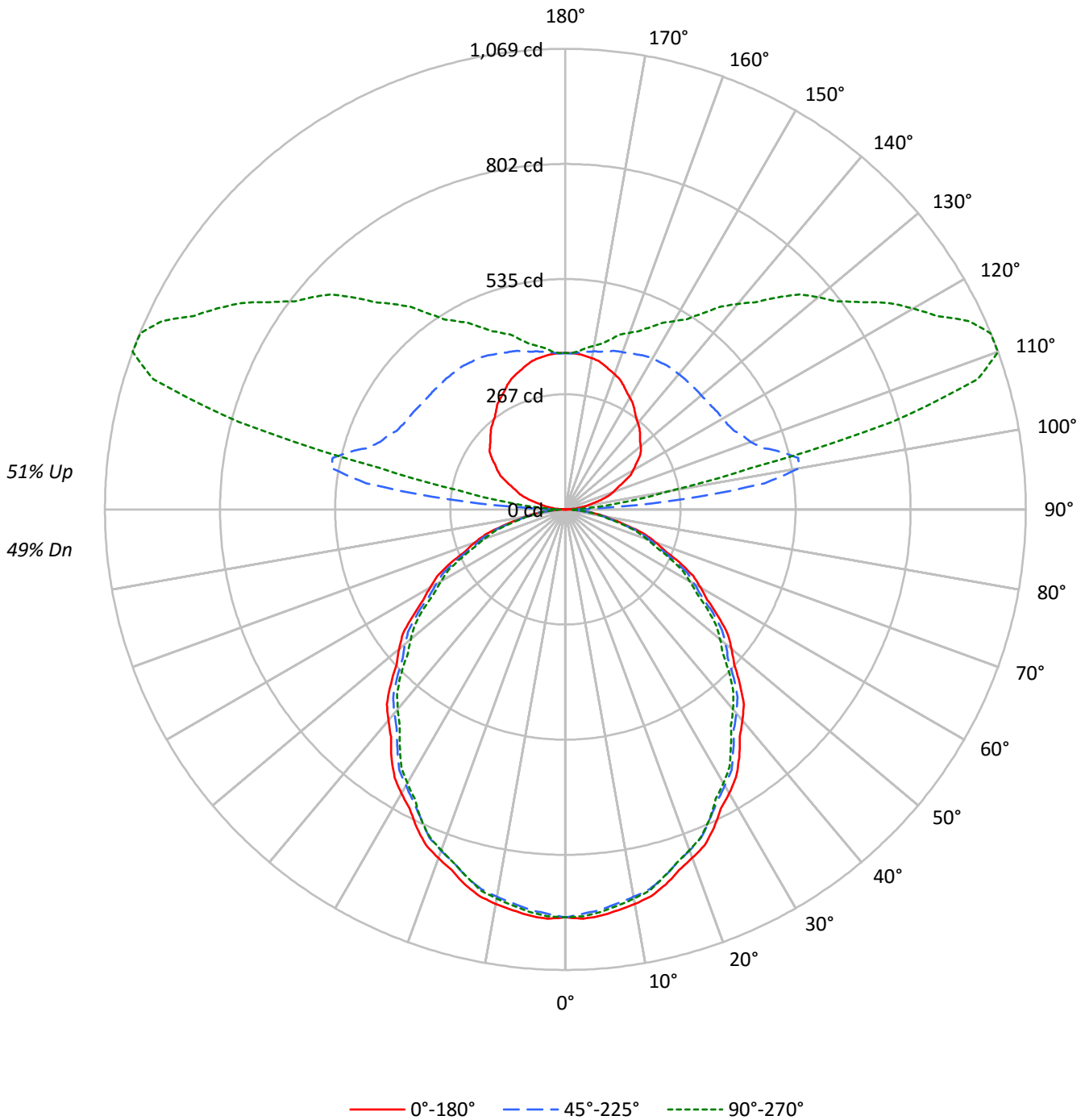
Lumens per Lamp: N/A
Luminaire Lumens: 4934.2 lumens
Efficiency: N/A
Efficacy: 107.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 45.9
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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CATALOG NUMBER: SA2XXDIP-C675D725U940-4F0-1E-UDD-F4

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	107	107	107	107	98	98	98	98	83	83	83	68	68	68	55	55	55	49
1	98	93	89	86	90	86	83	80	72	70	68	60	58	57	49	48	46	41
2	89	81	75	70	82	75	70	65	64	60	56	53	50	47	43	41	39	34
3	81	72	64	58	74	66	60	55	56	51	47	47	43	40	38	35	33	29
4	74	63	55	49	68	59	52	46	50	44	40	42	38	34	34	31	29	25
5	68	56	48	42	62	52	45	40	45	39	35	37	33	30	31	28	25	22
6	63	51	42	37	58	47	40	35	40	34	30	34	29	26	28	25	22	19
7	58	46	38	32	53	42	35	30	36	31	27	31	26	23	25	22	20	17
8	54	41	34	28	49	39	32	27	33	28	24	28	24	21	23	20	18	15
9	50	38	30	25	46	35	29	24	30	25	21	26	22	19	21	18	16	14
10	47	35	27	23	43	32	26	21	28	23	19	24	20	17	20	17	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15285	15285	15285
5°	15344	15123	15211
10°	15252	14969	15044
15°	15064	14775	14760
20°	14795	14483	14467
25°	14530	14125	14125
30°	14188	13798	13679
35°	13868	13403	13204
40°	13468	13009	12760
45°	13075	12618	12305
50°	12645	12210	11776
55°	12197	11738	11299
60°	11699	11170	10756
65°	11163	10609	10120
70°	10485	9928	9456
75°	9538	9145	8914
80°	8461	8210	7782
85°	6928	6576	5891



TEST NUMBER: P331356-940

CATALOG NUMBER: SA2XXDIP-C675D725U940-4F0-1E-UDD-F4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.0	1.8
10°-20°	250.5	5.1
20°-30°	368.2	7.5
30°-40°	427.7	8.7
40°-50°	427.2	8.7
50°-60°	372.6	7.6
60°-70°	275.5	5.6
70°-80°	156.0	3.2
80°-90°	45.2	0.9
90°-100°	144.9	2.9
100°-110°	491.8	10.0
110°-120°	522.5	10.6
120°-130°	430.1	8.7
130°-140°	345.4	7.0
140°-150°	261.0	5.3
150°-160°	183.4	3.7
160°-170°	108.0	2.2
170°-180°	35.1	0.7
0°-30°	707.7	14.3
0°-40°	1135.4	23.0
0°-60°	1935.1	39.2
0°-90°	2411.9	48.9
90°-120°	1159.2	23.5
90°-150°	2195.7	44.5
90°-180°	2522.0	51.1
0°-180°	4934.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	947	947	947	947	947	
5°	947	943	933	940	938	90
15°	901	895	884	887	883	254
25°	816	808	793	794	793	375
35°	704	694	680	675	670	439
45°	573	566	553	543	539	442
55°	433	428	417	406	401	387
65°	292	286	278	270	265	289
75°	153	151	147	142	143	163
85°	37	36	36	33	32	43
90°	1	9	24	23	23	3
95°	24	60	273	103	80	26
105°	85	128	516	923	786	90
115°	150	189	432	892	1034	149
125°	209	247	415	722	839	186
135°	245	293	410	607	695	190
145°	280	322	408	507	555	176
155°	318	344	397	449	466	147
165°	347	358	380	403	409	98
175°	362	362	365	370	369	34
180°	362	362	362	362	362	



TEST NUMBER: P331356-940

CATALOG NUMBER: SA2XXDIP-C675D725U940-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	946.7	946.7	946.7	946.7	946.7	946.7	946.7	946.7	946.7	946.7	946.7
2.5°	951.1	950.3	949.5	948.7	947.9	946.6	944.8	943.0	941.2	939.4	941.0
5°	946.7	945.9	945.1	944.3	943.5	942.0	939.8	937.5	935.3	933.1	934.7
7.5°	938.3	937.1	935.9	934.6	933.4	931.6	929.3	927.0	924.8	922.5	924.1
10°	930.3	928.9	927.5	926.0	924.7	922.7	920.3	917.9	915.4	913.0	914.6
12.5°	919.4	918.2	916.9	915.6	914.4	912.6	910.1	907.7	905.3	902.9	904.0
15°	901.2	900.0	898.8	897.6	896.3	894.4	891.8	889.1	886.5	883.9	884.8
17.5°	877.9	876.6	875.5	874.2	873.1	871.1	868.4	865.8	863.1	860.4	861.4
20°	861.1	860.0	858.7	857.5	856.3	854.3	851.4	848.6	845.8	842.9	843.6
22.5°	844.4	842.7	841.0	839.3	837.6	835.4	832.8	830.1	827.4	824.7	824.8
25°	815.6	814.0	812.4	810.7	809.1	806.6	803.2	799.8	796.3	792.9	793.3
27.5°	782.8	781.4	780.0	778.5	777.0	775.0	772.2	769.5	766.8	764.1	763.5
30°	761.0	759.4	757.8	756.2	754.6	752.2	749.2	746.2	743.2	740.1	739.5
32.5°	737.7	736.4	735.1	733.8	732.5	730.3	727.1	723.9	720.7	717.5	716.4
35°	703.6	701.7	699.6	697.6	695.5	692.9	689.7	686.4	683.2	680.0	678.8
37.5°	665.2	663.4	661.6	659.9	658.2	655.6	652.4	649.2	646.0	642.7	641.1
40°	639.0	637.4	635.8	634.2	632.6	630.2	626.9	623.7	620.5	617.2	615.4
42.5°	613.6	611.9	610.3	608.7	607.1	604.7	601.4	598.2	594.9	591.7	589.7
45°	572.6	571.1	569.7	568.4	566.9	564.7	561.7	558.7	555.6	552.6	550.4
47.5°	531.8	530.5	529.1	527.8	526.5	524.2	521.0	517.9	514.8	511.6	509.3
50°	503.4	502.4	501.4	500.3	499.4	497.4	494.6	491.8	488.9	486.1	483.3
52.5°	475.7	474.4	473.1	471.7	470.4	468.4	465.7	463.1	460.4	457.7	455.4
55°	433.3	432.1	430.9	429.6	428.5	426.6	424.2	421.8	419.4	417.0	414.5
57.5°	390.7	389.8	388.8	387.8	386.8	385.0	382.4	379.7	377.0	374.3	371.9
60°	362.3	361.5	360.7	359.9	359.1	357.2	354.5	351.6	348.7	345.9	343.7
62.5°	334.7	333.3	332.1	330.7	329.5	327.7	325.6	323.3	321.2	319.0	316.9
65°	292.2	291.0	289.8	288.6	287.3	285.7	283.7	281.7	279.6	277.7	275.8
67.5°	249.1	248.1	247.1	246.1	245.1	243.8	241.9	240.1	238.4	236.5	235.1
70°	222.1	221.3	220.5	219.7	218.9	217.6	215.7	213.9	212.1	210.3	208.8
72.5°	194.5	193.6	192.8	192.0	191.2	190.2	189.0	187.9	186.7	185.5	184.1
75°	152.9	152.5	152.1	151.7	151.3	150.6	149.6	148.6	147.6	146.6	145.3
77.5°	115.8	115.1	114.4	113.7	113.1	112.5	112.1	111.6	111.3	110.8	110.3
80°	91.0	90.9	90.6	90.4	90.2	89.9	89.5	89.1	88.7	88.3	87.7
82.5°	67.8	67.7	67.7	67.6	67.6	67.4	67.1	67.0	66.7	66.4	65.7
85°	37.4	37.1	36.9	36.7	36.5	36.3	36.1	35.9	35.7	35.5	34.9
87.5°	13.3	13.4	13.6	13.6	13.5	13.6	13.9	14.6	15.2	14.9	14.3
90°	0.7	2.8	5.6	7.0	8.4	10.4	13.9	18.8	23.0	23.7	23.0
92.5°	8.5	12.3	17.3	20.3	25.1	31.7	47.4	69.6	89.3	90.6	76.5
95°	24.4	27.2	34.2	40.4	51.5	68.3	100.4	161.0	241.9	273.2	239.1
97.5°	39.8	43.5	50.9	60.4	73.2	92.1	132.4	217.0	351.3	466.5	489.4
100°	53.7	55.7	62.1	73.2	87.1	106.6	143.6	228.6	379.2	550.6	651.0
102.5°	66.5	68.0	74.3	85.4	100.0	119.5	153.6	229.2	368.6	553.5	711.2
105°	85.1	87.8	92.7	103.2	118.5	138.0	170.8	232.8	347.9	516.5	702.0
107.5°	105.1	107.4	112.1	121.7	136.9	156.6	188.3	242.5	337.5	476.9	640.7
110°	118.5	121.3	125.5	134.6	149.2	169.4	200.0	250.2	335.3	458.0	602.3



TEST NUMBER: P331356-940

CATALOG NUMBER: SA2XXDIP-C675D725U940-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	130.7	133.6	138.3	146.8	160.9	181.6	211.2	258.6	335.8	445.7	575.5
115°	149.9	153.4	157.6	165.9	179.9	198.7	228.6	271.2	338.8	432.2	542.3
117.5°	169.7	172.5	176.6	184.0	197.4	217.0	244.7	284.5	343.8	425.6	521.4
120°	181.9	184.8	188.9	195.2	209.1	228.6	255.8	293.5	347.1	421.7	510.2
122.5°	193.7	195.9	200.0	206.9	220.8	240.9	266.4	301.3	351.1	419.5	500.8
125°	209.1	211.2	215.3	223.7	237.7	257.2	282.3	313.7	356.9	415.4	487.2
127.5°	221.4	224.2	230.1	239.2	252.6	272.7	297.1	325.2	362.9	413.0	474.7
130°	228.6	231.4	238.4	248.2	262.1	281.6	306.0	332.5	367.4	412.0	466.4
132.5°	235.3	238.7	246.2	256.5	271.0	290.5	313.8	339.7	371.8	411.4	459.7
135°	245.4	248.2	256.5	267.0	283.0	302.6	324.9	349.2	377.1	410.5	450.3
137.5°	254.9	258.2	266.5	277.7	293.6	311.7	333.8	356.5	381.8	410.5	443.7
140°	262.1	264.8	273.2	284.4	299.7	317.9	338.8	360.3	384.1	409.8	439.9
142.5°	269.3	271.6	279.4	290.5	305.3	322.4	342.7	363.7	385.8	409.8	436.0
145°	280.2	283.0	290.0	300.4	314.3	329.7	348.6	368.0	387.5	408.5	430.8
147.5°	291.9	294.0	300.7	310.3	321.9	335.6	353.3	370.4	388.2	406.0	425.5
150°	299.7	301.8	307.4	316.5	326.9	339.5	355.5	371.5	387.5	404.3	421.0
152.5°	307.6	308.5	314.1	322.0	331.9	343.4	357.8	372.1	386.5	401.5	417.1
155°	318.5	319.2	323.4	331.1	338.8	349.2	361.1	372.9	384.8	396.6	409.8
157.5°	327.8	328.4	331.8	338.5	344.6	353.4	363.5	372.9	381.6	391.6	403.1
160°	333.9	334.6	337.3	343.0	348.6	356.1	364.5	372.9	379.9	388.3	398.1
162.5°	340.0	339.6	342.4	346.9	351.9	357.8	365.2	372.4	378.3	385.5	393.5
165°	347.1	346.4	347.9	352.0	355.5	359.7	366.0	370.9	375.1	379.9	386.2
167.5°	353.0	352.1	353.4	356.1	358.6	361.2	365.8	369.9	371.8	375.1	378.9
170°	356.9	355.5	356.1	358.3	359.7	361.8	365.2	368.7	370.1	372.2	375.1
172.5°	359.1	358.3	357.8	360.0	360.8	362.3	364.7	367.0	367.9	368.9	371.1
175°	361.8	361.1	360.3	361.8	361.8	362.5	363.8	365.2	364.5	365.2	366.0
177.5°	363.0	361.9	361.3	362.5	362.5	362.5	363.0	364.2	363.0	362.5	363.0
180°	362.5	362.5	362.5	362.5	362.5	362.5	362.5	362.5	362.5	362.5	362.5



TEST NUMBER: P331356-940

CATALOG NUMBER: SA2XXDIP-C675D725U940-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	946.7	946.7	946.7	946.7	946.7	946.7	946.7	946.7
2.5°	942.6	944.3	945.9	946.6	946.2	945.9	945.6	945.3
5°	936.3	937.9	939.5	940.1	939.8	939.3	939.0	938.5
7.5°	925.8	927.4	929.0	929.5	929.1	928.7	928.3	927.8
10°	916.2	917.9	919.5	920.0	919.4	918.8	918.2	917.6
12.5°	905.1	906.2	907.4	907.7	907.2	906.9	906.4	906.0
15°	885.6	886.4	887.2	887.1	886.0	885.0	884.0	883.0
17.5°	862.3	863.2	864.2	864.2	863.2	862.2	861.2	860.2
20°	844.2	844.8	845.3	845.3	844.5	843.6	842.8	842.0
22.5°	825.0	825.1	825.2	825.0	824.6	824.0	823.6	823.1
25°	793.7	794.1	794.5	794.5	794.1	793.7	793.3	792.9
27.5°	762.9	762.3	761.7	760.9	759.9	758.9	758.0	757.0
30°	738.9	738.2	737.6	736.9	736.1	735.3	734.5	733.7
32.5°	715.3	714.3	713.1	712.2	711.4	710.6	709.7	708.9
35°	677.6	676.4	675.1	674.0	673.1	672.0	671.0	669.9
37.5°	639.7	638.2	636.7	635.4	634.5	633.5	632.6	631.6
40°	613.6	611.7	609.9	608.6	607.8	607.0	606.2	605.4
42.5°	587.7	585.8	583.8	582.2	581.0	580.0	578.8	577.7
45°	548.1	545.9	543.7	542.2	541.4	540.6	539.8	538.9
47.5°	506.9	504.5	502.2	500.4	499.3	498.1	497.0	495.8
50°	480.5	477.6	474.7	472.9	471.8	470.8	469.8	468.8
52.5°	453.0	450.7	448.4	446.5	445.1	443.8	442.5	441.1
55°	412.1	409.7	407.2	405.5	404.5	403.5	402.4	401.4
57.5°	369.5	367.1	364.8	363.2	362.4	361.7	360.9	360.1
60°	341.4	339.2	337.0	335.6	335.0	334.4	333.8	333.1
62.5°	314.9	312.8	310.8	309.3	308.5	307.7	307.0	306.2
65°	274.0	272.2	270.4	268.9	268.0	266.9	265.9	264.9
67.5°	233.6	232.3	230.9	229.7	228.9	228.1	227.3	226.5
70°	207.4	206.1	204.6	203.5	202.7	201.9	201.1	200.3
72.5°	182.7	181.3	179.9	178.8	178.2	177.5	176.9	176.2
75°	144.1	142.9	141.7	141.3	141.7	142.1	142.5	142.9
77.5°	109.7	109.1	108.4	107.9	107.3	106.7	106.2	105.6
80°	87.1	86.5	85.9	85.3	85.0	84.5	84.2	83.7
82.5°	64.9	64.1	63.4	63.0	62.9	62.8	62.7	62.6
85°	34.3	33.7	33.1	32.6	32.5	32.3	32.1	31.8
87.5°	13.6	12.9	12.8	12.6	12.4	12.2	12.0	11.9
90°	22.3	21.0	22.3	23.0	23.0	23.0	23.0	23.0
92.5°	60.8	52.2	46.3	42.0	41.4	39.1	39.8	38.6
95°	182.6	140.1	110.8	95.5	86.4	80.9	78.7	79.5
97.5°	426.1	348.7	273.2	222.9	189.6	172.5	162.3	156.4
100°	636.4	550.0	454.5	370.1	312.3	282.3	262.1	249.5
102.5°	774.2	754.7	684.7	595.4	532.5	481.3	456.1	439.2
105°	846.9	925.7	934.8	911.8	868.5	825.3	795.3	785.6
107.5°	794.5	913.1	985.6	1019.4	1024.8	1022.4	1016.5	1003.4
110°	749.3	874.1	963.3	1020.5	1050.4	1063.7	1070.0	1069.3



TEST NUMBER: P331356-940

CATALOG NUMBER: SA2XXDIP-C675D725U940-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	708.1	827.8	923.2	988.7	1030.4	1052.6	1064.4	1068.2
115°	657.3	764.6	856.0	927.7	977.2	1009.3	1027.4	1033.8
117.5°	619.1	713.4	796.2	863.5	914.0	947.9	967.0	972.2
120°	600.1	686.6	760.5	823.9	872.7	905.4	925.7	932.6
122.5°	585.1	664.3	734.2	791.6	835.4	867.5	885.6	891.4
125°	563.2	635.0	696.3	748.6	789.1	815.6	832.9	838.6
127.5°	541.6	606.5	664.4	712.7	748.0	772.8	787.8	792.3
130°	527.6	587.6	642.7	688.7	722.8	746.5	760.5	766.1
132.5°	514.2	569.8	620.4	663.6	697.2	720.9	733.7	738.7
135°	495.6	541.6	587.6	626.6	656.7	679.7	692.1	695.0
137.5°	480.7	519.2	555.7	589.7	617.1	636.9	647.8	652.0
140°	471.2	504.7	536.7	567.4	589.7	607.8	618.3	622.5
142.5°	463.4	491.9	519.4	545.1	566.3	582.7	592.1	592.9
145°	452.4	475.4	497.0	517.2	534.0	545.8	552.8	554.8
147.5°	443.9	462.0	478.8	493.7	507.5	516.9	521.7	522.9
150°	437.7	453.1	467.7	480.3	490.7	499.1	503.3	504.0
152.5°	431.6	445.9	458.3	469.1	477.3	484.6	487.7	487.8
155°	423.1	434.3	444.7	452.4	460.0	464.9	467.7	466.4
157.5°	413.2	422.6	431.3	437.3	442.7	446.8	448.1	448.1
160°	407.1	414.7	422.4	427.3	432.2	435.7	436.3	436.3
162.5°	400.9	407.5	414.0	417.9	422.7	425.1	425.8	425.2
165°	391.7	396.6	401.5	404.3	407.1	409.8	409.8	409.2
167.5°	383.0	386.7	390.0	392.6	393.9	395.4	395.2	394.4
170°	378.5	380.6	383.3	384.8	385.5	387.5	386.8	385.5
172.5°	373.4	375.1	377.3	378.1	378.8	379.8	379.1	378.3
175°	368.0	368.7	369.4	370.1	370.1	370.9	370.1	368.7
177.5°	364.2	364.2	364.7	364.7	364.7	364.7	364.2	363.0
180°	362.5	362.5	362.5	362.5	362.5	362.5	362.5	362.5

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