

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: P331336-940

Luminaire Tested: **SA2XXDIP-C675D330U940-4F0-1E-UDD-F**

Issue Date: 10/7/2019

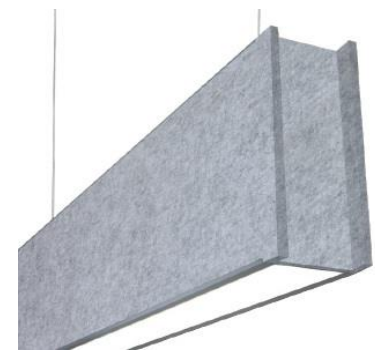
Test Information

Test Method: LM-79-08
Report Number: P331336-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C675D330U940-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 330 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

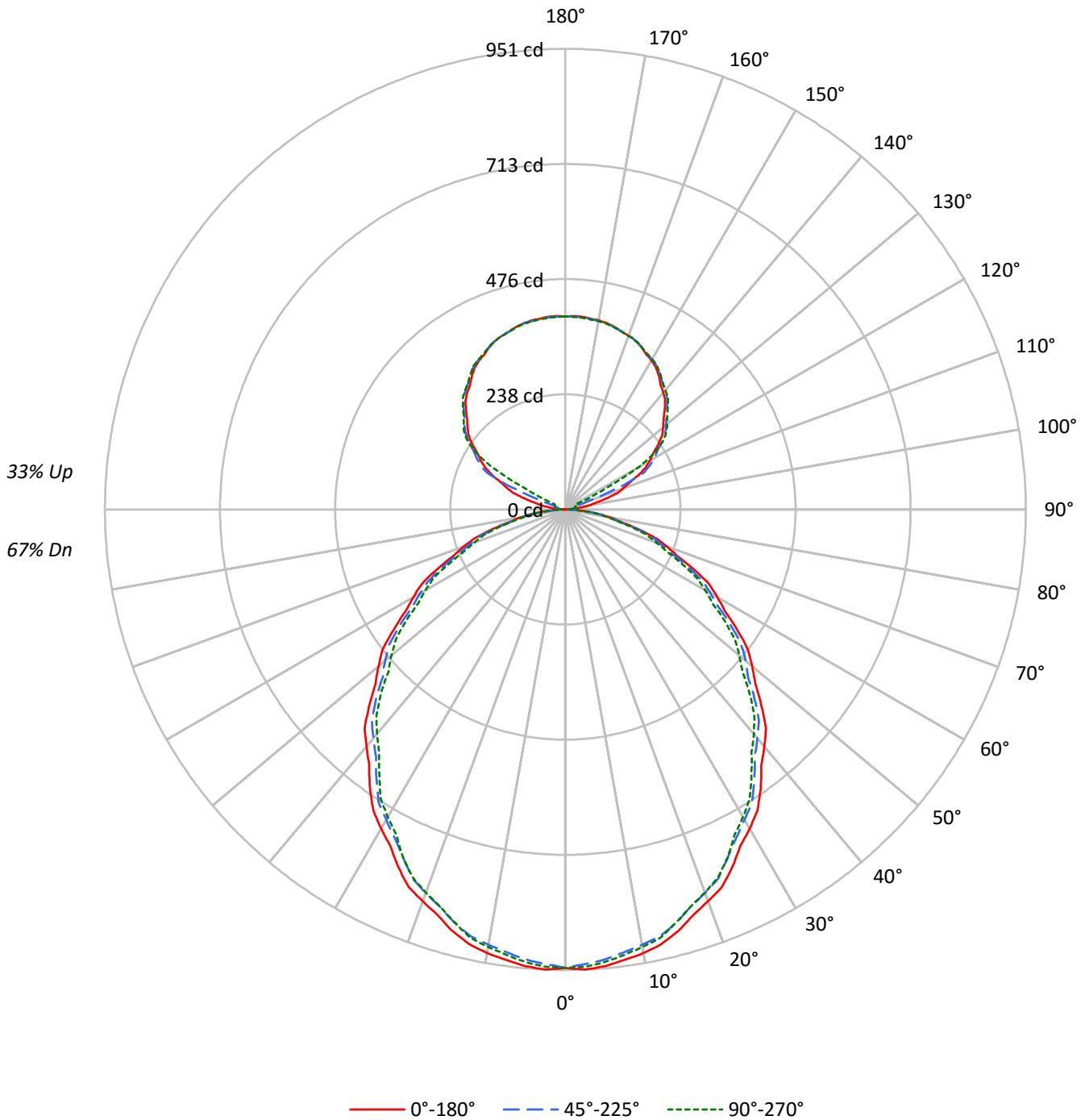
Lumens per Lamp: N/A
Luminaire Lumens: 3577.3 lumens
Efficiency: N/A
Efficacy: 102.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

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



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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	111	111	111	111	105	105	105	105	93	93	93	82	82	82	72	72	72	67
1	102	97	93	90	96	92	88	85	82	79	77	72	70	68	64	62	61	57
2	93	85	79	73	87	80	75	70	72	67	63	64	60	57	56	54	51	48
3	85	75	67	61	79	71	64	58	63	58	53	56	52	48	50	46	44	40
4	77	66	58	52	73	63	55	50	56	50	46	50	45	42	44	41	38	35
5	71	59	51	45	67	56	49	43	50	44	39	45	40	36	40	36	33	30
6	66	53	45	39	62	51	43	37	45	39	35	41	36	32	36	32	29	26
7	61	48	40	34	57	46	38	33	41	35	31	37	32	28	33	29	26	23
8	56	44	36	30	53	42	34	29	38	32	27	34	29	25	31	26	23	21
9	53	40	32	27	50	38	31	26	35	29	24	31	26	23	28	24	21	19
10	49	37	29	24	47	35	28	24	32	26	22	29	24	21	26	22	19	17

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



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.0	2.5
10°-20°	250.5	7.0
20°-30°	368.2	10.3
30°-40°	427.7	12.0
40°-50°	427.2	11.9
50°-60°	372.6	10.4
60°-70°	275.5	7.7
70°-80°	156.0	4.4
80°-90°	42.9	1.2
90°-100°	13.3	0.4
100°-110°	48.7	1.4
110°-120°	130.3	3.6
120°-130°	215.1	6.0
130°-140°	228.7	6.4
140°-150°	212.6	5.9
150°-160°	170.9	4.8
160°-170°	110.1	3.1
170°-180°	37.9	1.1
0°-30°	707.7	19.8
0°-40°	1135.4	31.7
0°-60°	1935.1	54.1
0°-90°	2409.6	67.4
90°-120°	192.3	5.4
90°-150°	848.7	23.7
90°-180°	1168.0	32.7
0°-180°	3577.3	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°	0	3	6	7	8	3
95°	19	10	11	13	12	23
105°	88	91	18	21	22	94
115°	166	171	178	51	24	163
125°	234	238	244	246	246	209
135°	290	295	297	300	300	224
145°	336	336	341	343	342	210
155°	370	368	371	373	371	171
165°	390	389	390	391	390	110
175°	399	397	398	400	397	38
180°	398	398	398	398	398	



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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°	13.2	13.0	12.8	12.7	12.4	12.2	12.0	11.8	11.6	11.3	11.0
90°	0.3	1.0	1.7	2.4	3.1	3.7	4.2	4.7	5.3	5.8	6.1
92.5°	5.8	5.8	5.7	5.6	5.5	5.7	5.9	6.2	6.4	6.7	6.9
95°	18.7	16.6	14.5	12.4	10.3	9.5	9.9	10.3	10.8	11.2	11.6
97.5°	37.2	31.2	25.2	19.4	13.4	10.9	11.9	12.9	14.0	15.1	15.3
100°	51.0	42.3	33.4	24.7	16.0	12.0	13.2	14.3	15.3	16.4	16.9
102.5°	66.3	64.4	62.5	60.7	58.9	53.3	44.2	35.1	26.0	16.9	17.6
105°	87.7	89.5	91.5	93.5	95.3	87.6	70.1	52.6	35.0	17.6	18.3
107.5°	112.0	113.6	115.1	116.7	118.2	108.5	87.6	66.6	45.6	24.6	23.9
110°	127.7	129.0	130.5	131.8	133.1	124.5	106.0	87.5	68.9	50.5	44.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	142.5	143.7	144.9	146.1	147.2	145.5	141.0	136.4	131.8	127.2	103.9
115°	165.8	166.8	168.0	169.1	170.1	171.5	173.1	174.7	176.3	177.9	148.2
117.5°	186.6	187.8	189.0	190.3	191.5	192.6	193.8	194.8	195.9	197.1	189.8
120°	201.8	202.8	203.8	204.7	205.6	206.7	207.9	209.0	210.2	211.3	212.1
122.5°	214.7	215.8	216.8	217.8	218.8	219.9	221.1	222.4	223.7	225.0	225.4
125°	234.4	235.2	236.0	236.9	237.7	238.8	240.0	241.2	242.4	243.6	244.1
127.5°	252.2	253.2	254.0	255.0	255.9	256.8	257.7	258.7	259.6	260.5	261.1
130°	263.5	264.6	265.6	266.6	267.6	268.5	269.2	269.9	270.6	271.3	272.0
132.5°	275.1	275.9	276.8	277.7	278.6	279.3	280.0	280.7	281.4	282.1	282.8
135°	290.1	291.1	292.1	293.1	294.2	295.0	295.5	296.1	296.7	297.3	297.9
137.5°	305.2	305.9	306.7	307.4	308.1	308.8	309.4	310.0	310.8	311.4	312.0
140°	315.1	315.7	316.1	316.6	317.2	317.8	318.5	319.2	319.9	320.6	321.2
142.5°	323.4	323.9	324.3	324.9	325.3	325.9	326.7	327.5	328.3	329.1	329.7
145°	336.4	336.4	336.4	336.3	336.2	336.7	337.8	338.9	340.0	341.1	341.5
147.5°	347.9	347.6	347.3	347.1	346.9	347.2	348.3	349.5	350.5	351.6	351.9
150°	355.2	354.7	354.3	353.8	353.4	353.7	354.7	355.8	356.8	357.8	358.2
152.5°	361.4	361.0	360.4	359.9	359.4	359.6	360.6	361.6	362.6	363.6	363.9
155°	370.5	369.9	369.3	368.7	368.2	368.3	369.1	369.8	370.6	371.3	371.8
157.5°	377.6	377.1	376.6	376.1	375.6	375.7	376.2	376.7	377.3	377.8	378.3
160°	381.7	381.4	380.9	380.6	380.2	380.2	380.6	380.9	381.4	381.7	382.1
162.5°	385.4	385.0	384.7	384.2	383.9	383.9	384.1	384.5	384.9	385.2	385.7
165°	390.4	390.0	389.6	389.2	388.9	388.8	389.0	389.1	389.3	389.5	389.9
167.5°	394.0	393.7	393.3	392.9	392.5	392.4	392.6	392.8	393.0	393.2	393.6
170°	396.2	395.7	395.4	395.0	394.6	394.5	394.6	394.8	394.8	395.0	395.5
172.5°	397.5	397.2	396.7	396.4	396.0	395.8	396.0	396.1	396.3	396.4	396.8
175°	399.3	398.9	398.4	398.0	397.5	397.3	397.5	397.6	397.8	397.9	398.3
177.5°	399.6	399.2	398.9	398.5	398.1	398.1	398.1	398.1	398.1	398.2	398.6
180°	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4



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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°	10.5	10.1	9.6	9.4	9.3	9.1	9.0	8.8
90°	6.4	6.7	7.0	7.3	7.4	7.5	7.7	7.8
92.5°	7.0	7.2	7.3	7.5	7.6	7.7	7.7	7.8
95°	11.9	12.2	12.5	12.7	12.6	12.5	12.5	12.4
97.5°	15.6	15.8	16.1	16.2	16.3	16.4	16.5	16.6
100°	17.5	18.0	18.5	18.8	18.9	19.1	19.2	19.4
102.5°	18.2	18.9	19.5	20.0	20.2	20.3	20.5	20.7
105°	19.0	19.7	20.4	20.9	21.1	21.4	21.7	21.9
107.5°	23.2	22.5	21.8	21.5	21.8	22.0	22.3	22.6
110°	37.6	31.2	24.8	21.8	22.0	22.3	22.6	22.7



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CATALOG NUMBER: SA2XXDIP-C675D330U940-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	80.5	57.2	33.8	22.2	22.4	22.6	22.8	23.0
115°	118.6	88.9	59.2	42.1	37.5	32.9	28.3	23.6
117.5°	182.7	175.5	168.4	157.2	142.0	126.9	111.7	96.6
120°	212.9	213.7	214.4	210.4	201.8	193.1	184.5	175.8
122.5°	225.9	226.3	226.8	226.1	224.5	222.8	221.1	219.5
125°	244.5	245.0	245.4	245.8	245.9	246.1	246.3	246.5
127.5°	261.8	262.4	263.1	263.4	263.5	263.5	263.5	263.6
130°	272.7	273.4	274.1	274.5	274.4	274.3	274.3	274.2
132.5°	283.4	283.9	284.5	284.8	284.7	284.7	284.6	284.5
135°	298.5	299.2	299.8	300.1	300.0	299.8	299.7	299.5
137.5°	312.6	313.3	313.9	314.1	313.9	313.7	313.4	313.3
140°	321.7	322.4	322.9	323.1	322.7	322.4	322.1	321.7
142.5°	330.2	330.7	331.3	331.4	331.0	330.7	330.4	330.0
145°	342.0	342.4	342.9	343.0	342.6	342.3	342.0	341.6
147.5°	352.2	352.6	352.9	352.9	352.7	352.4	352.1	351.9
150°	358.6	358.9	359.4	359.4	359.1	358.7	358.4	358.1
152.5°	364.4	364.7	365.1	365.1	364.6	364.3	363.8	363.4
155°	372.1	372.5	372.9	372.8	372.3	371.8	371.3	370.8
157.5°	378.7	379.2	379.5	379.5	379.0	378.5	378.0	377.6
160°	382.5	382.9	383.3	383.3	382.8	382.4	381.9	381.5
162.5°	386.0	386.5	386.9	386.9	386.3	385.8	385.2	384.7
165°	390.4	390.8	391.3	391.3	390.8	390.4	389.9	389.5
167.5°	394.0	394.5	394.9	394.8	394.3	393.7	393.2	392.5
170°	395.9	396.4	396.8	396.7	396.2	395.6	395.0	394.4
172.5°	397.3	397.7	398.1	398.1	397.5	397.0	396.4	395.8
175°	398.8	399.2	399.7	399.6	399.0	398.3	397.6	397.0
177.5°	399.0	399.3	399.7	399.6	399.1	398.7	398.2	397.8
180°	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4

(END OF REPORT)