

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: P331379-840

Luminaire Tested: **SA2XXDIP-C865D330U840-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

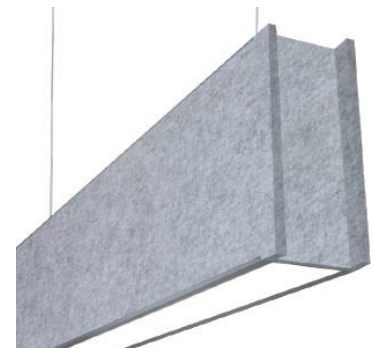
Test Information

Test Method: LM-79-08
Report Number: P331379-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C865D330U840-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 330 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4711.4 lumens
Efficiency: N/A
Efficacy: 108.3 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: Semi-Direct

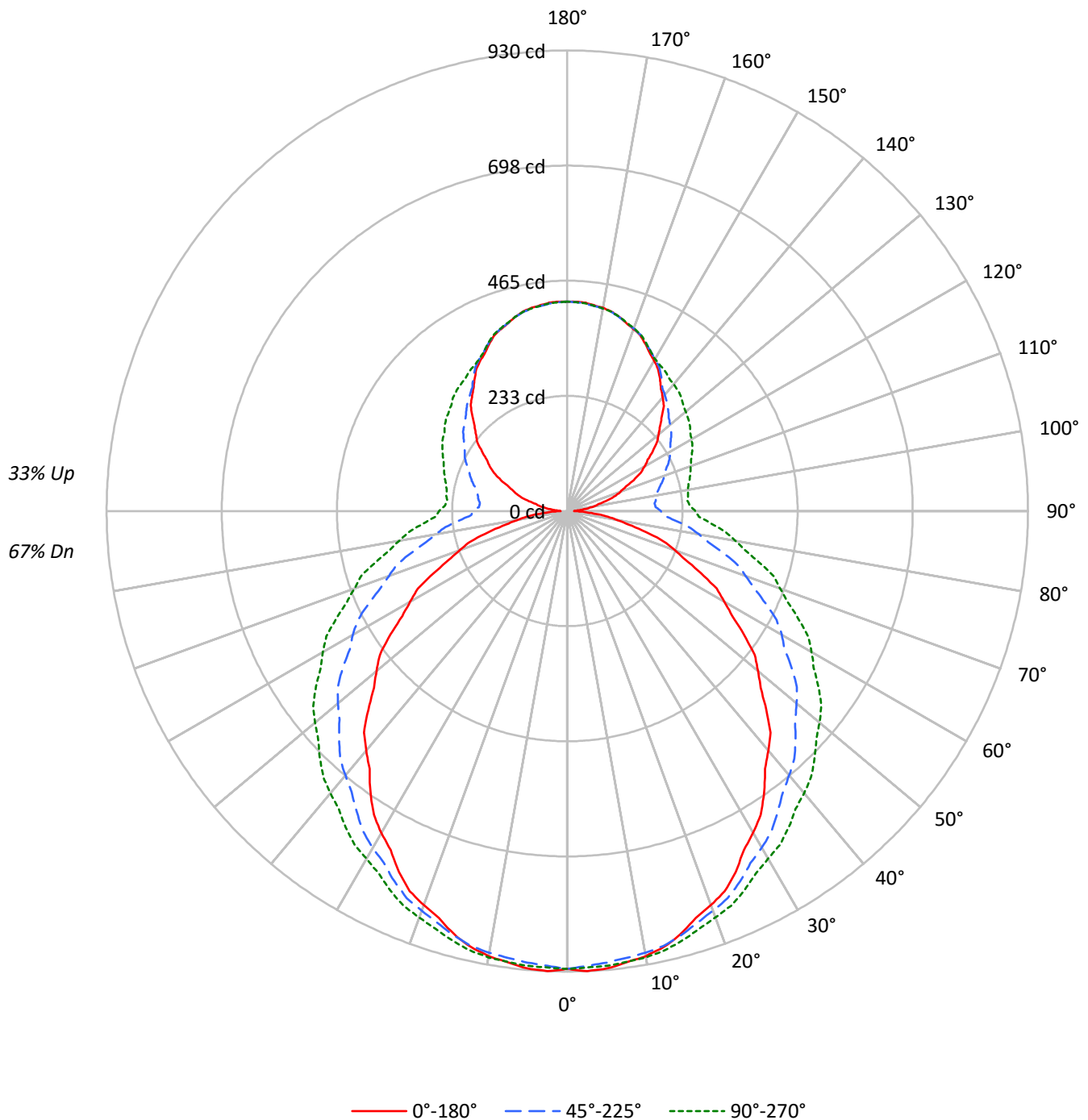
Input Watts (W): 43.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331379-840

CATALOG NUMBER: SA2XXDIP-C865D330U840-4F0-1E-UDD-D1

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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	111	111	111	111	105	105	105	105	93	93	93	81	81	81	71	71	71
1	99	94	89	85	93	89	84	81	78	75	72	69	66	64	60	58	56
2	90	81	74	68	84	76	70	65	67	62	58	59	55	52	52	49	46
3	81	71	62	56	76	67	59	53	59	53	48	52	47	43	45	41	38
4	74	62	53	47	69	59	51	45	52	45	40	46	41	36	40	36	32
5	68	55	46	40	64	52	44	38	46	40	35	41	35	31	36	31	28
6	63	49	41	34	59	47	39	33	42	35	30	37	31	27	32	28	24
7	58	45	36	30	54	42	34	29	38	31	26	33	28	24	29	25	21
8	54	41	32	26	50	38	31	25	34	28	23	31	25	21	27	23	19
9	50	37	29	24	47	35	28	23	31	25	21	28	23	19	25	20	17
10	47	34	26	21	44	32	25	20	29	23	19	26	21	17	23	19	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14928	14928	14928
5°	15002	14370	14315
10°	14907	13945	13789
15°	14701	13496	13236
20°	14442	13015	12701
25°	14187	12551	12216
30°	13824	12074	11729
35°	13459	11611	11386
40°	13075	11219	11044
45°	12709	10869	10750
50°	12316	10551	10462
55°	11908	10209	10166
60°	11404	9856	9857
65°	10880	9439	9485
70°	10292	8992	9089
75°	9539	8554	8722
80°	8357	8107	8349
85°	7227	7720	8061

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.6	1.9
10°-20°	251.2	5.3
20°-30°	380.7	8.1
30°-40°	463.7	9.8
40°-50°	498.9	10.6
50°-60°	484.5	10.3
60°-70°	423.0	9.0
70°-80°	325.7	6.9
80°-90°	220.3	4.7
90°-100°	177.4	3.8
100°-110°	193.2	4.1
110°-120°	214.8	4.6
120°-130°	227.6	4.8
130°-140°	226.9	4.8
140°-150°	208.8	4.4
150°-160°	172.7	3.7
160°-170°	114.5	2.4
170°-180°	40.0	0.8
0°-30°	719.6	15.3
0°-40°	1183.3	25.1
0°-60°	2166.6	46.0
0°-90°	3135.6	66.6
90°-120°	585.4	12.4
90°-150°	1248.7	26.5
90°-180°	1576.0	33.5
0°-180°	4711.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	925	925	925	925	925	
5°	927	923	915	923	922	88
15°	884	887	887	898	898	249
25°	804	814	826	841	846	369
35°	693	716	741	769	780	433
45°	568	605	651	691	706	438
55°	436	485	553	600	619	389
65°	298	364	442	495	514	295
75°	165	240	326	381	401	174
85°	48	132	217	271	292	52
90°	14	96	189	240	259	10
95°	29	97	177	226	243	30
105°	83	125	194	240	256	89
115°	148	167	225	263	278	146
125°	210	216	255	289	302	188
135°	270	274	288	315	326	209
145°	326	329	331	339	344	204
155°	373	374	375	377	376	172
165°	406	405	405	408	406	114
175°	422	421	420	422	421	40
180°	423	423	423	423	423	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	924.6	924.6	924.6	924.6	924.6	924.6	924.6	924.6	924.6	924.6	924.6
2.5°	930.0	929.3	928.6	927.9	927.2	925.9	924.2	922.6	920.9	919.3	920.5
5°	927.3	926.5	925.5	924.6	923.7	922.4	920.6	918.8	917.1	915.2	917.1
7.5°	919.0	918.4	917.8	917.3	916.7	915.6	914.2	912.9	911.5	910.2	912.3
10°	912.6	912.0	911.4	910.8	910.2	909.5	908.6	907.7	906.8	905.8	908.3
12.5°	901.8	902.0	902.1	902.2	902.3	902.0	901.4	900.7	900.1	899.4	901.8
15°	884.4	885.0	885.7	886.3	886.8	887.1	887.1	887.1	887.1	887.1	889.8
17.5°	861.9	863.1	864.4	865.7	866.9	868.0	869.0	869.9	870.9	871.8	874.6
20°	846.9	848.4	849.9	851.4	852.8	854.2	855.4	856.6	857.8	859.0	862.2
22.5°	830.8	832.5	834.2	836.0	837.7	839.4	841.1	842.7	844.4	846.1	849.4
25°	804.1	806.1	808.2	810.3	812.3	814.8	817.4	820.1	822.7	825.5	829.0
27.5°	771.8	775.3	778.6	782.0	785.5	788.7	791.8	795.1	798.2	801.3	805.9
30°	750.4	754.3	758.2	762.0	765.9	769.8	773.7	777.5	781.4	785.3	790.0
32.5°	726.8	731.1	735.5	739.9	744.3	748.7	753.3	757.9	762.4	767.0	772.5
35°	692.8	697.8	703.0	708.0	713.1	718.4	724.1	729.7	735.4	741.0	747.6
37.5°	655.8	661.7	667.5	673.3	679.1	685.7	693.1	700.4	707.7	715.1	722.4
40°	631.2	637.7	644.3	650.9	657.3	664.7	672.7	680.8	688.8	696.8	704.6
42.5°	607.5	614.1	620.7	627.2	633.8	641.7	650.9	660.1	669.3	678.6	687.0
45°	568.2	576.2	584.2	592.3	600.4	609.6	620.0	630.5	640.9	651.3	660.5
47.5°	529.3	538.1	546.8	555.6	564.3	574.8	587.0	599.3	611.5	623.7	633.3
50°	502.5	511.7	521.0	530.2	539.5	550.8	564.1	577.5	591.0	604.4	614.5
52.5°	476.8	486.5	496.2	505.9	515.6	527.6	541.7	555.7	569.9	584.0	594.3
55°	435.6	446.3	457.0	467.7	478.4	491.5	507.0	522.5	538.0	553.4	564.1
57.5°	394.8	406.9	419.0	431.0	443.1	457.1	472.8	488.7	504.4	520.2	531.8
60°	365.9	378.6	391.4	404.2	417.1	431.9	448.9	465.9	482.8	499.9	511.2
62.5°	340.1	353.4	366.7	379.9	393.2	408.4	425.4	442.3	459.3	476.3	488.3
65°	297.5	312.0	326.7	341.2	355.9	371.9	389.5	407.1	424.6	442.2	454.4
67.5°	258.3	273.6	288.8	304.1	319.3	336.0	354.0	371.9	389.9	407.9	420.2
70°	230.5	246.0	261.5	276.9	292.5	309.4	327.9	346.3	364.8	383.2	396.1
72.5°	204.8	220.8	236.7	252.7	268.6	285.9	304.7	323.4	342.0	360.7	373.3
75°	164.8	181.5	198.1	214.9	231.6	249.4	268.4	287.5	306.6	325.6	338.4
77.5°	126.2	143.7	161.2	178.5	196.0	214.4	233.8	253.2	272.5	291.9	304.6
80°	100.5	118.7	136.8	155.0	173.2	191.9	211.3	230.7	249.9	269.3	281.9
82.5°	79.1	96.9	114.9	132.8	150.8	169.6	189.1	208.7	228.3	247.9	260.4
85°	48.3	66.8	85.1	103.6	122.1	140.9	159.9	178.9	198.0	217.1	229.6
87.5°	26.4	44.2	62.2	80.2	98.1	116.7	136.1	155.6	175.0	194.4	206.5
90°	13.7	32.0	50.2	68.5	86.6	106.1	126.9	147.7	168.5	189.3	201.2
92.5°	18.7	35.4	52.2	69.0	85.8	103.5	122.3	141.1	159.9	178.5	190.3
95°	29.3	44.0	58.9	73.6	88.5	104.8	122.9	140.9	159.0	176.9	188.2
97.5°	43.3	56.5	69.6	82.7	95.8	111.2	128.7	146.0	163.5	181.0	192.0
100°	54.7	66.3	78.0	89.7	101.3	115.6	132.5	149.5	166.3	183.3	194.3
102.5°	65.6	76.1	86.7	97.4	107.9	121.4	137.9	154.4	171.0	187.4	198.2
105°	83.4	92.3	101.2	110.1	118.9	131.2	146.8	162.5	178.1	193.7	204.3
107.5°	102.7	110.0	117.2	124.4	131.7	142.8	157.6	172.4	187.2	202.1	212.2
110°	114.2	120.6	127.0	133.5	139.9	150.4	165.0	179.6	194.2	208.7	218.3

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	127.8	133.4	138.9	144.3	149.8	159.5	173.3	187.0	200.9	214.7	224.0
115°	148.0	151.8	155.6	159.4	163.1	171.6	184.8	198.0	211.3	224.6	233.4
117.5°	166.8	169.7	172.4	175.2	177.9	185.3	197.2	209.2	221.2	233.1	241.8
120°	180.3	182.1	183.9	185.7	187.5	194.1	205.4	216.7	227.9	239.2	247.6
122.5°	192.6	193.8	195.0	196.2	197.5	203.5	214.3	225.0	235.7	246.5	254.4
125°	210.4	211.1	211.8	212.5	213.2	218.2	227.5	236.8	246.1	255.4	263.2
127.5°	228.9	229.5	230.1	230.8	231.4	235.4	242.8	250.1	257.6	265.0	272.1
130°	240.7	241.4	242.2	242.9	243.6	247.0	253.1	259.2	265.3	271.4	278.4
132.5°	253.8	254.3	254.9	255.4	256.0	258.6	263.5	268.3	273.3	278.1	284.7
135°	270.0	270.8	271.8	272.7	273.5	275.5	278.6	281.8	284.9	288.0	294.2
137.5°	288.5	289.1	289.8	290.4	291.1	292.2	293.7	295.2	296.7	298.2	303.7
140°	299.6	300.0	300.4	300.8	301.2	301.9	303.0	304.0	305.0	306.0	310.7
142.5°	311.0	311.4	311.8	312.3	312.7	313.1	313.5	313.9	314.3	314.7	318.5
145°	326.1	326.7	327.2	327.8	328.3	328.8	329.3	329.8	330.2	330.7	332.6
147.5°	340.7	341.4	342.0	342.7	343.4	343.9	344.2	344.6	344.9	345.2	345.6
150°	350.7	351.2	351.6	352.1	352.6	353.0	353.4	353.7	354.0	354.3	354.6
152.5°	359.6	360.0	360.5	361.0	361.4	361.9	362.2	362.6	363.0	363.5	363.8
155°	372.8	373.0	373.3	373.5	373.8	374.1	374.3	374.5	374.8	375.0	375.4
157.5°	384.2	384.4	384.5	384.7	384.9	385.0	385.2	385.3	385.4	385.6	386.1
160°	391.0	391.2	391.3	391.5	391.6	391.8	391.8	391.9	392.0	392.1	392.5
162.5°	397.3	397.4	397.4	397.4	397.5	397.5	397.6	397.7	397.8	397.8	398.4
165°	405.7	405.6	405.5	405.5	405.4	405.3	405.3	405.3	405.3	405.3	405.9
167.5°	412.6	412.4	412.2	411.9	411.7	411.6	411.5	411.5	411.5	411.5	412.0
170°	416.4	416.2	415.9	415.7	415.5	415.3	415.2	415.1	415.1	415.0	415.5
172.5°	418.9	418.7	418.5	418.2	418.0	417.8	417.8	417.7	417.6	417.5	418.1
175°	422.1	421.8	421.6	421.3	421.1	420.9	420.8	420.6	420.4	420.3	420.8
177.5°	423.3	423.1	422.9	422.8	422.6	422.4	422.3	422.2	422.0	421.9	422.3
180°	422.8	422.8	422.8	422.8	422.8	422.8	422.8	422.8	422.8	422.8	422.8

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	924.6	924.6	924.6	924.6	924.6	924.6	924.6	924.6
2.5°	921.6	922.8	924.0	924.4	923.9	923.4	922.9	922.5
5°	918.8	920.6	922.4	923.1	922.8	922.5	922.2	921.9
7.5°	914.4	916.6	918.8	919.7	919.4	919.1	918.8	918.5
10°	910.6	913.0	915.4	916.5	916.1	915.8	915.5	915.2
12.5°	904.2	906.6	909.0	910.0	909.7	909.4	909.1	908.8
15°	892.4	895.1	897.9	899.0	898.7	898.4	898.1	897.9
17.5°	877.5	880.2	883.0	884.4	884.4	884.4	884.4	884.4
20°	865.6	868.8	872.0	873.7	873.7	873.7	873.7	873.7
22.5°	852.6	856.0	859.2	861.1	861.5	862.0	862.5	863.0
25°	832.6	836.2	839.8	842.0	842.8	843.7	844.7	845.6
27.5°	810.4	815.0	819.4	822.0	822.7	823.3	824.0	824.7
30°	794.8	799.5	804.4	807.2	808.0	808.9	809.8	810.7
32.5°	778.0	783.5	788.9	792.5	794.1	795.7	797.3	798.9
35°	754.2	760.7	767.3	771.5	773.7	775.8	777.8	779.9
37.5°	729.5	736.8	744.1	748.8	751.0	753.3	755.5	757.7
40°	712.3	720.0	727.8	733.0	735.7	738.3	741.0	743.8
42.5°	695.5	704.0	712.5	718.0	720.6	723.4	726.0	728.7
45°	669.7	678.9	688.2	694.3	697.3	700.2	703.3	706.2
47.5°	643.0	652.6	662.3	668.7	672.0	675.3	678.5	681.9
50°	624.6	634.7	644.9	651.6	654.8	658.1	661.4	664.7
52.5°	604.7	615.1	625.4	632.4	635.9	639.4	642.9	646.4
55°	574.9	585.6	596.3	603.6	607.4	611.4	615.2	619.0
57.5°	543.3	554.8	566.4	574.2	578.0	582.0	585.9	589.9
60°	522.5	533.8	545.1	552.8	557.0	561.2	565.3	569.6
62.5°	500.3	512.3	524.3	532.4	536.2	540.2	544.1	548.1
65°	466.7	478.9	491.1	499.1	502.9	506.9	510.7	514.5
67.5°	432.5	444.8	457.3	465.4	469.5	473.5	477.6	481.6
70°	408.9	421.6	434.4	442.6	446.3	449.8	453.4	457.0
72.5°	385.9	398.4	411.0	419.4	423.7	428.0	432.3	436.6
75°	351.2	364.1	376.9	385.2	389.1	392.9	396.8	400.7
77.5°	317.4	330.1	342.8	351.3	355.5	359.6	363.9	368.0
80°	294.4	306.9	319.4	327.7	331.8	336.1	340.2	344.4
82.5°	273.0	285.4	297.9	306.2	310.1	314.0	317.9	321.8
85°	242.1	254.6	267.1	275.5	279.6	283.8	287.9	292.2
87.5°	218.6	230.8	242.9	250.9	254.7	258.5	262.4	266.1
90°	212.9	224.6	236.4	244.1	247.7	251.4	255.1	258.7
92.5°	202.0	213.7	225.4	233.1	236.6	240.2	243.8	247.4
95°	199.5	210.9	222.2	229.5	233.0	236.4	239.8	243.3
97.5°	203.0	214.0	225.0	232.3	235.8	239.3	242.8	246.3
100°	205.3	216.3	227.3	234.4	237.6	240.9	244.0	247.2
102.5°	209.1	219.9	230.9	237.8	241.1	244.2	247.4	250.6
105°	214.9	225.5	236.1	243.0	246.3	249.5	252.8	256.1
107.5°	222.3	232.3	242.4	248.8	251.8	254.7	257.6	260.5
110°	227.8	237.4	246.9	253.2	256.2	259.2	262.3	265.3

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CATALOG NUMBER: SA2XXDIP-C865D330U840-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	233.4	242.7	252.1	258.2	261.4	264.5	267.6	270.6
115°	242.3	251.2	259.9	265.9	268.9	272.0	275.0	278.0
117.5°	250.3	258.9	267.6	273.3	276.1	278.9	281.8	284.5
120°	255.9	264.3	272.6	278.3	281.3	284.4	287.4	290.4
122.5°	262.4	270.2	278.1	283.4	286.0	288.6	291.2	293.9
125°	270.9	278.7	286.6	291.8	294.4	297.0	299.5	302.2
127.5°	279.1	286.3	293.4	298.1	300.4	302.9	305.2	307.6
130°	285.4	292.4	299.3	303.9	305.9	308.0	310.0	312.1
132.5°	291.2	297.7	304.3	308.6	310.8	313.0	315.1	317.2
135°	300.4	306.6	312.8	316.9	319.0	321.1	323.4	325.5
137.5°	309.1	314.5	319.9	323.5	325.2	326.9	328.6	330.3
140°	315.5	320.2	325.0	328.1	329.6	331.0	332.5	334.0
142.5°	322.4	326.3	330.1	332.8	334.0	335.2	336.4	337.6
145°	334.5	336.4	338.2	339.7	340.9	342.0	343.3	344.4
147.5°	346.0	346.4	346.8	347.2	347.6	348.0	348.5	348.9
150°	354.8	355.0	355.3	355.3	355.0	354.8	354.6	354.3
152.5°	364.1	364.4	364.7	364.7	364.4	364.1	363.8	363.5
155°	375.8	376.2	376.6	376.7	376.4	376.2	376.0	375.7
157.5°	386.6	387.2	387.7	387.8	387.4	387.0	386.7	386.3
160°	393.0	393.5	394.0	394.0	393.7	393.4	393.1	392.8
162.5°	398.9	399.4	400.0	400.0	399.7	399.3	398.9	398.5
165°	406.4	407.0	407.5	407.6	407.2	406.8	406.4	406.1
167.5°	412.6	413.1	413.7	413.8	413.4	412.9	412.5	412.1
170°	416.1	416.6	417.2	417.2	416.8	416.3	415.8	415.3
172.5°	418.6	419.2	419.7	419.8	419.3	418.8	418.4	417.9
175°	421.4	421.9	422.5	422.5	422.1	421.6	421.1	420.6
177.5°	422.7	423.0	423.4	423.4	423.0	422.7	422.3	421.9
180°	422.8	422.8	422.8	422.8	422.8	422.8	422.8	422.8

(END OF REPORT)