

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: P331306-830

Luminaire Tested: **SA2XXDIP-C485D725U830-4F0-1E-UDD-D**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331306-830  
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-C485D725U830-4F0-1E-UDD-D  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 725 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

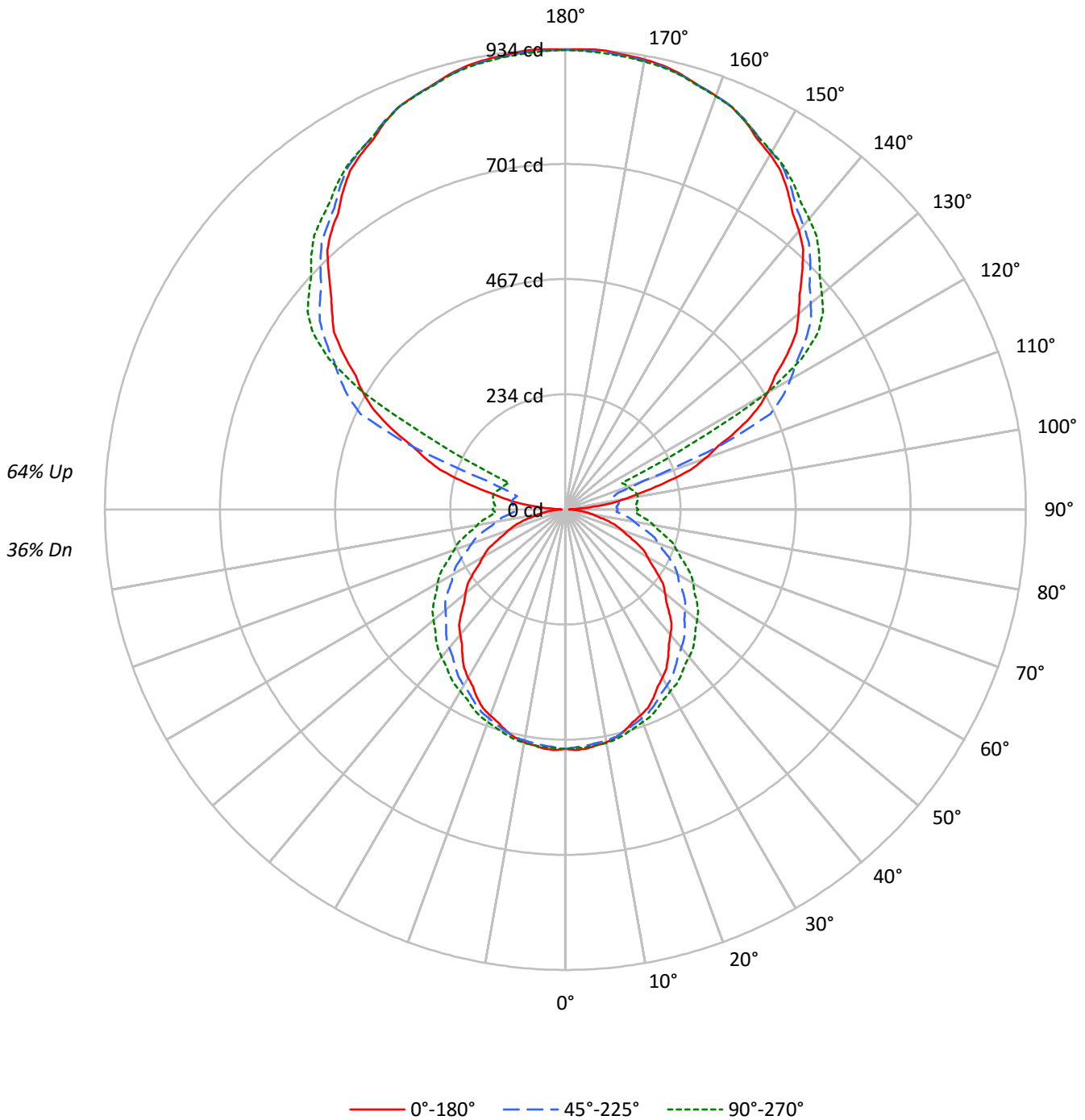
Lumens per Lamp: N/A  
Luminaire Lumens: 4585.9 lumens  
Efficiency: N/A  
Efficacy: 119.4 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')  
CIE Type: Semi-Indirect

Input Watts (W): 38.4  
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				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	104	104	104	104	94	94	94	94	76	76	76	59	59	59	43	43	43	36
1	94	89	85	81	84	80	77	74	64	62	60	50	48	47	36	35	34	28
2	85	77	70	65	76	70	64	59	56	52	48	43	40	38	31	30	28	23
3	77	67	60	54	69	61	54	49	49	44	40	38	34	32	27	25	23	19
4	70	59	51	45	63	54	47	41	43	38	34	33	30	27	24	22	20	16
5	64	52	44	38	58	48	40	35	38	33	29	30	26	23	22	19	17	13
6	59	47	39	33	53	43	35	30	34	29	25	27	23	20	20	17	15	12
7	54	42	34	29	49	38	31	26	31	26	22	24	20	17	18	15	13	10
8	50	38	30	25	45	35	28	23	28	23	19	22	18	15	16	14	12	9
9	47	35	27	22	42	32	25	20	26	21	17	20	16	14	15	12	10	8
10	44	32	24	20	39	29	22	18	24	19	15	19	15	12	14	11	9	7

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

	0°	45°	90°
0°	7842	7842	7842
5°	7880	7549	7520
10°	7831	7327	7244
15°	7723	7090	6952
20°	7587	6836	6671
25°	7453	6592	6417
30°	7262	6342	6160
35°	7069	6100	5981
40°	6869	5895	5801
45°	6677	5709	5648
50°	6471	5541	5495
55°	6254	5363	5341
60°	5990	5177	5178
65°	5716	4959	4983
70°	5407	4723	4775
75°	5013	4495	4582
80°	4391	4260	4385
85°	3800	4054	4232



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	46.0	1.0
10°-20°	132.0	2.9
20°-30°	200.0	4.4
30°-40°	243.6	5.3
40°-50°	262.1	5.7
50°-60°	254.5	5.5
60°-70°	222.2	4.8
70°-80°	171.1	3.7
80°-90°	117.1	2.6
90°-100°	110.2	2.4
100°-110°	171.7	3.7
110°-120°	342.8	7.5
120°-130°	524.2	11.4
130°-140°	543.8	11.9
140°-150°	498.7	10.9
150°-160°	399.7	8.7
160°-170°	257.6	5.6
170°-180°	88.7	1.9
0°-30°	378.0	8.2
0°-40°	621.6	13.6
0°-60°	1138.1	24.8
0°-90°	1648.5	35.9
90°-120°	624.7	13.6
90°-150°	2191.5	47.8
90°-180°	2937.0	64.0
0°-180°	4585.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	486	486	486	486	486	
5°	487	485	481	485	484	46
15°	465	466	466	472	472	131
25°	422	427	434	442	444	194
35°	364	376	389	404	410	227
45°	298	318	342	363	371	230
55°	229	255	291	315	325	204
65°	156	191	232	260	270	155
75°	87	126	171	200	210	92
85°	25	69	114	142	153	27
90°	8	56	106	137	148	7
95°	50	62	107	136	145	58
105°	208	239	102	133	144	223
115°	390	411	458	181	126	384
125°	550	560	594	616	626	490
135°	679	690	703	723	729	524
145°	787	787	798	806	807	492
155°	866	861	868	872	867	399
165°	913	909	911	915	911	258
175°	934	929	930	934	928	89
180°	932	932	932	932	932	



TEST NUMBER: P331306-830

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7
2.5°	488.5	488.1	487.8	487.4	487.0	486.4	485.5	484.7	483.8	482.9	483.5
5°	487.1	486.6	486.2	485.7	485.2	484.6	483.6	482.7	481.7	480.8	481.7
7.5°	482.8	482.4	482.1	481.8	481.5	481.0	480.2	479.6	478.8	478.1	479.2
10°	479.4	479.1	478.7	478.4	478.2	477.8	477.3	476.8	476.4	475.9	477.1
12.5°	473.7	473.8	473.9	473.9	474.0	473.8	473.5	473.2	472.8	472.5	473.7
15°	464.6	464.9	465.2	465.5	465.8	466.0	466.0	466.0	466.0	466.0	467.4
17.5°	452.8	453.5	454.1	454.8	455.4	456.0	456.5	456.9	457.5	458.0	459.4
20°	444.9	445.6	446.5	447.2	448.0	448.7	449.3	450.0	450.6	451.2	452.9
22.5°	436.4	437.3	438.3	439.1	440.1	440.9	441.9	442.7	443.6	444.5	446.2
25°	422.4	423.5	424.5	425.7	426.7	428.0	429.4	430.8	432.3	433.6	435.5
27.5°	405.5	407.3	409.1	410.9	412.6	414.3	415.9	417.6	419.2	420.9	423.3
30°	394.2	396.2	398.2	400.3	402.4	404.4	406.4	408.4	410.5	412.5	415.0
32.5°	381.8	384.1	386.3	388.7	391.0	393.3	395.7	398.1	400.5	402.9	405.8
35°	363.9	366.6	369.3	371.9	374.6	377.4	380.3	383.3	386.3	389.3	392.7
37.5°	344.5	347.6	350.6	353.7	356.8	360.2	364.1	367.9	371.7	375.6	379.5
40°	331.6	335.0	338.5	341.9	345.3	349.1	353.4	357.6	361.8	366.1	370.1
42.5°	319.1	322.6	326.0	329.5	332.9	337.1	342.0	346.8	351.7	356.5	360.9
45°	298.5	302.7	306.9	311.1	315.4	320.2	325.6	331.1	336.7	342.1	346.9
47.5°	278.1	282.7	287.3	291.8	296.4	302.0	308.4	314.8	321.2	327.6	332.7
50°	264.0	268.8	273.7	278.5	283.3	289.3	296.3	303.4	310.5	317.4	322.8
52.5°	250.4	255.5	260.6	265.8	270.9	277.1	284.6	291.9	299.4	306.8	312.2
55°	228.8	234.4	240.1	245.6	251.3	258.2	266.4	274.5	282.6	290.7	296.3
57.5°	207.4	213.8	220.1	226.4	232.8	240.1	248.4	256.7	264.9	273.2	279.4
60°	192.2	198.9	205.7	212.4	219.0	226.9	235.8	244.7	253.6	262.6	268.5
62.5°	178.6	185.6	192.7	199.6	206.6	214.5	223.4	232.3	241.3	250.2	256.5
65°	156.3	163.9	171.6	179.3	186.9	195.4	204.6	213.9	223.1	232.3	238.7
67.5°	135.7	143.7	151.7	159.8	167.8	176.4	186.0	195.4	204.8	214.2	220.7
70°	121.1	129.2	137.3	145.4	153.6	162.5	172.2	181.9	191.6	201.3	208.0
72.5°	107.5	115.9	124.3	132.7	141.1	150.2	160.0	169.8	179.6	189.5	196.1
75°	86.6	95.4	104.1	112.8	121.6	131.0	141.0	151.0	161.1	171.1	177.8
77.5°	66.4	75.5	84.6	93.8	103.0	112.6	122.8	133.0	143.2	153.4	160.0
80°	52.8	62.3	71.9	81.4	91.0	100.9	111.0	121.1	131.3	141.5	148.1
82.5°	41.6	51.0	60.3	69.7	79.2	89.1	99.3	109.6	119.9	130.3	136.8
85°	25.4	35.1	44.8	54.5	64.1	74.0	84.0	94.0	104.1	114.0	120.6
87.5°	13.9	23.6	33.3	42.9	52.5	62.5	72.8	83.0	93.2	103.5	110.0
90°	7.7	18.5	29.1	39.9	50.6	61.5	72.8	84.0	95.2	106.4	113.4
92.5°	20.1	28.4	36.7	45.0	53.3	62.6	72.8	83.0	93.2	103.5	110.0
95°	49.5	51.8	54.3	56.6	59.1	65.5	76.0	86.3	96.8	107.3	114.0
97.5°	91.9	84.5	77.1	69.7	62.3	64.4	75.8	87.2	98.7	110.1	116.5
100°	124.2	109.5	94.8	80.0	65.3	63.6	74.9	86.2	97.6	108.9	115.8
102.5°	159.3	160.2	161.2	162.1	163.1	157.1	144.3	131.6	118.8	105.9	113.2
105°	208.5	217.5	226.6	235.5	244.6	232.7	200.0	167.2	134.4	101.7	108.8
107.5°	265.4	272.7	279.9	287.2	294.5	277.4	236.1	194.9	153.6	112.4	115.9
110°	301.5	307.7	314.1	320.4	326.6	311.9	276.3	240.6	205.0	169.4	159.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	336.0	341.5	346.9	352.2	357.7	358.6	355.2	351.9	348.5	345.1	295.4
115°	390.5	394.7	399.1	403.3	407.6	415.1	425.8	436.7	447.4	458.3	393.5
117.5°	438.5	442.4	446.4	450.4	454.4	460.9	470.0	479.1	488.1	497.2	485.1
120°	474.1	476.9	479.8	482.7	485.6	491.4	500.4	509.3	518.3	527.3	533.5
122.5°	504.3	506.9	509.5	512.2	514.7	520.5	529.3	538.1	547.0	555.7	561.1
125°	549.6	551.5	553.5	555.4	557.3	562.2	570.1	578.0	585.8	593.6	598.9
127.5°	591.3	593.2	595.2	597.2	599.3	603.3	609.4	615.7	621.8	627.9	633.4
130°	617.6	619.9	622.2	624.3	626.6	630.2	635.2	640.1	645.0	650.0	655.3
132.5°	644.6	646.5	648.4	650.3	652.1	655.2	659.4	663.5	667.7	671.9	676.9
135°	679.0	681.4	683.8	686.2	688.5	691.3	694.2	697.0	699.9	702.9	707.7
137.5°	714.4	716.0	717.7	719.3	721.0	722.9	725.2	727.4	729.6	731.8	736.2
140°	737.6	738.7	739.7	740.7	741.8	743.3	745.3	747.2	749.2	751.1	755.0
142.5°	757.1	758.0	758.9	759.8	760.7	762.1	764.1	766.1	768.1	770.0	773.3
145°	786.8	786.6	786.6	786.4	786.3	787.4	789.9	792.5	795.0	797.6	799.6
147.5°	813.4	812.8	812.3	811.7	811.2	812.1	814.6	817.1	819.6	822.2	823.0
150°	830.7	829.6	828.6	827.6	826.4	827.2	829.5	831.9	834.3	836.7	837.6
152.5°	845.2	844.0	842.9	841.7	840.6	841.1	843.4	845.6	847.9	850.2	851.1
155°	866.4	865.1	863.7	862.3	861.0	861.2	863.0	864.8	866.6	868.4	869.3
157.5°	883.0	881.8	880.7	879.6	878.4	878.4	879.8	881.0	882.2	883.5	884.6
160°	892.7	891.7	890.9	889.9	889.1	889.1	889.9	890.9	891.7	892.7	893.6
162.5°	901.4	900.4	899.6	898.6	897.7	897.7	898.4	899.2	900.0	900.8	901.8
165°	912.9	912.0	911.2	910.2	909.3	909.1	909.6	910.0	910.4	910.9	911.9
167.5°	921.5	920.7	919.7	918.9	917.9	917.7	918.1	918.5	919.0	919.4	920.4
170°	926.4	925.5	924.6	923.7	922.8	922.5	922.8	923.1	923.4	923.7	924.7
172.5°	929.6	928.7	927.8	926.9	926.0	925.8	926.0	926.3	926.6	926.9	928.0
175°	933.8	932.7	931.7	930.7	929.6	929.3	929.5	929.8	930.1	930.5	931.5
177.5°	934.5	933.7	932.8	932.0	931.1	930.8	930.9	931.0	931.1	931.2	932.1
180°	931.8	931.8	931.8	931.8	931.8	931.8	931.8	931.8	931.8	931.8	931.8



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7
2.5°	484.2	484.7	485.4	485.6	485.3	485.1	484.8	484.6
5°	482.7	483.6	484.6	484.9	484.7	484.7	484.5	484.3
7.5°	480.3	481.5	482.6	483.1	483.0	482.8	482.6	482.5
10°	478.3	479.6	480.9	481.5	481.3	481.1	481.0	480.8
12.5°	474.9	476.3	477.5	478.1	477.9	477.7	477.6	477.4
15°	468.8	470.2	471.6	472.2	472.1	471.9	471.7	471.6
17.5°	460.9	462.4	463.8	464.6	464.6	464.6	464.6	464.6
20°	454.7	456.4	458.1	458.9	458.9	458.9	458.9	458.9
22.5°	447.9	449.6	451.4	452.3	452.6	452.8	453.1	453.4
25°	437.3	439.2	441.1	442.3	442.8	443.3	443.7	444.2
27.5°	425.7	428.1	430.5	431.8	432.2	432.5	432.8	433.2
30°	417.5	420.0	422.5	424.0	424.4	424.9	425.4	425.8
32.5°	408.7	411.5	414.4	416.3	417.2	418.0	418.9	419.7
35°	396.2	399.6	403.0	405.3	406.4	407.5	408.6	409.7
37.5°	383.2	387.1	390.9	393.3	394.5	395.7	396.8	398.0
40°	374.2	378.2	382.3	385.0	386.4	387.9	389.3	390.7
42.5°	365.3	369.8	374.2	377.2	378.5	379.9	381.4	382.8
45°	351.9	356.7	361.5	364.7	366.3	367.9	369.4	371.0
47.5°	337.7	342.8	347.9	351.3	353.0	354.7	356.5	358.2
50°	328.1	333.4	338.7	342.2	344.0	345.7	347.4	349.1
52.5°	317.6	323.1	328.6	332.2	334.0	335.9	337.7	339.6
55°	302.0	307.6	313.2	317.1	319.1	321.1	323.2	325.2
57.5°	285.4	291.4	297.6	301.6	303.7	305.8	307.8	309.9
60°	274.5	280.4	286.3	290.4	292.6	294.8	297.0	299.2
62.5°	262.8	269.1	275.4	279.7	281.7	283.8	285.9	287.9
65°	245.2	251.6	258.0	262.2	264.2	266.3	268.2	270.3
67.5°	227.2	233.7	240.2	244.5	246.6	248.7	250.9	253.0
70°	214.8	221.5	228.2	232.5	234.4	236.3	238.2	240.1
72.5°	202.7	209.3	215.9	220.4	222.5	224.8	227.1	229.3
75°	184.5	191.2	197.9	202.4	204.3	206.4	208.4	210.5
77.5°	166.7	173.4	180.1	184.5	186.7	188.9	191.1	193.3
80°	154.7	161.2	167.8	172.1	174.4	176.5	178.7	180.9
82.5°	143.4	150.0	156.5	160.8	162.9	164.9	167.0	169.1
85°	127.1	133.7	140.3	144.7	146.8	149.1	151.3	153.4
87.5°	116.6	123.1	129.6	133.9	136.0	138.1	140.2	142.1
90°	120.5	127.4	134.4	139.0	141.2	143.4	145.5	147.7
92.5°	116.5	123.1	129.6	133.8	135.9	138.0	140.1	142.1
95°	120.6	127.3	134.0	138.3	140.0	141.7	143.5	145.2
97.5°	122.9	129.2	135.6	139.9	141.9	143.9	145.9	148.0
100°	122.8	129.8	136.8	141.3	143.3	145.3	147.3	149.4
102.5°	120.4	127.6	134.9	139.5	141.7	143.8	145.9	148.1
105°	115.9	123.0	130.2	134.9	137.2	139.5	141.9	144.1
107.5°	119.5	123.1	126.7	129.6	132.0	134.2	136.6	138.9
110°	149.4	139.4	129.5	125.6	128.0	130.3	132.6	134.9





TEST NUMBER: P331306-830

CATALOG NUMBER: SA2XXDIP-C485D725U830-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	245.7	196.0	146.5	122.7	124.9	127.1	129.3	131.5
115°	328.9	264.2	199.5	162.7	153.5	144.5	135.4	126.4
117.5°	473.0	460.8	448.7	425.7	391.8	357.9	324.0	290.2
120°	539.6	545.8	552.0	545.8	527.4	508.9	490.3	471.8
122.5°	566.4	571.7	577.1	578.5	576.1	573.6	571.2	568.7
125°	604.2	609.4	614.7	618.3	620.2	622.0	623.9	625.8
127.5°	638.8	644.2	649.6	653.0	654.5	656.0	657.4	658.9
130°	660.7	666.2	671.6	674.8	675.9	677.0	678.1	679.2
132.5°	682.0	687.0	692.0	695.1	696.3	697.3	698.4	699.6
135°	712.5	717.2	722.0	724.9	725.9	726.8	727.7	728.7
137.5°	740.6	744.9	749.2	751.7	752.2	752.8	753.4	753.8
140°	758.8	762.7	766.6	768.5	768.7	768.9	769.1	769.3
142.5°	776.5	779.7	782.9	784.6	784.7	784.7	784.8	784.9
145°	801.6	803.6	805.6	806.5	806.6	806.6	806.7	806.7
147.5°	824.0	824.9	825.8	826.1	825.9	825.6	825.4	825.1
150°	838.5	839.4	840.3	840.4	839.6	838.9	838.1	837.4
152.5°	852.0	852.9	853.8	853.8	852.8	851.8	850.8	849.8
155°	870.2	871.1	872.0	871.9	870.6	869.5	868.3	867.0
157.5°	885.5	886.6	887.6	887.5	886.4	885.1	884.0	882.9
160°	894.5	895.4	896.3	896.2	895.1	894.1	893.1	892.0
162.5°	902.8	903.8	904.8	904.7	903.4	902.1	900.9	899.6
165°	912.9	914.1	915.1	915.1	914.1	912.9	911.9	910.9
167.5°	921.5	922.6	923.6	923.4	922.1	920.8	919.4	918.0
170°	925.8	926.8	927.9	927.7	926.4	925.0	923.7	922.4
172.5°	929.1	930.1	931.1	930.9	929.6	928.3	926.9	925.6
175°	932.6	933.6	934.6	934.4	932.9	931.4	929.9	928.4
177.5°	932.9	933.8	934.6	934.5	933.4	932.4	931.2	930.2
180°	931.8	931.8	931.8	931.8	931.8	931.8	931.8	931.8

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