

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: P332534-830

Luminaire Tested: **S124DIP-S350D1205U830-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332534-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIP-S350D1205U830-4F0-1E-UDD-F4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1205 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5486.3 lumens
Efficiency: N/A
Efficacy: 130.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Semi-Indirect

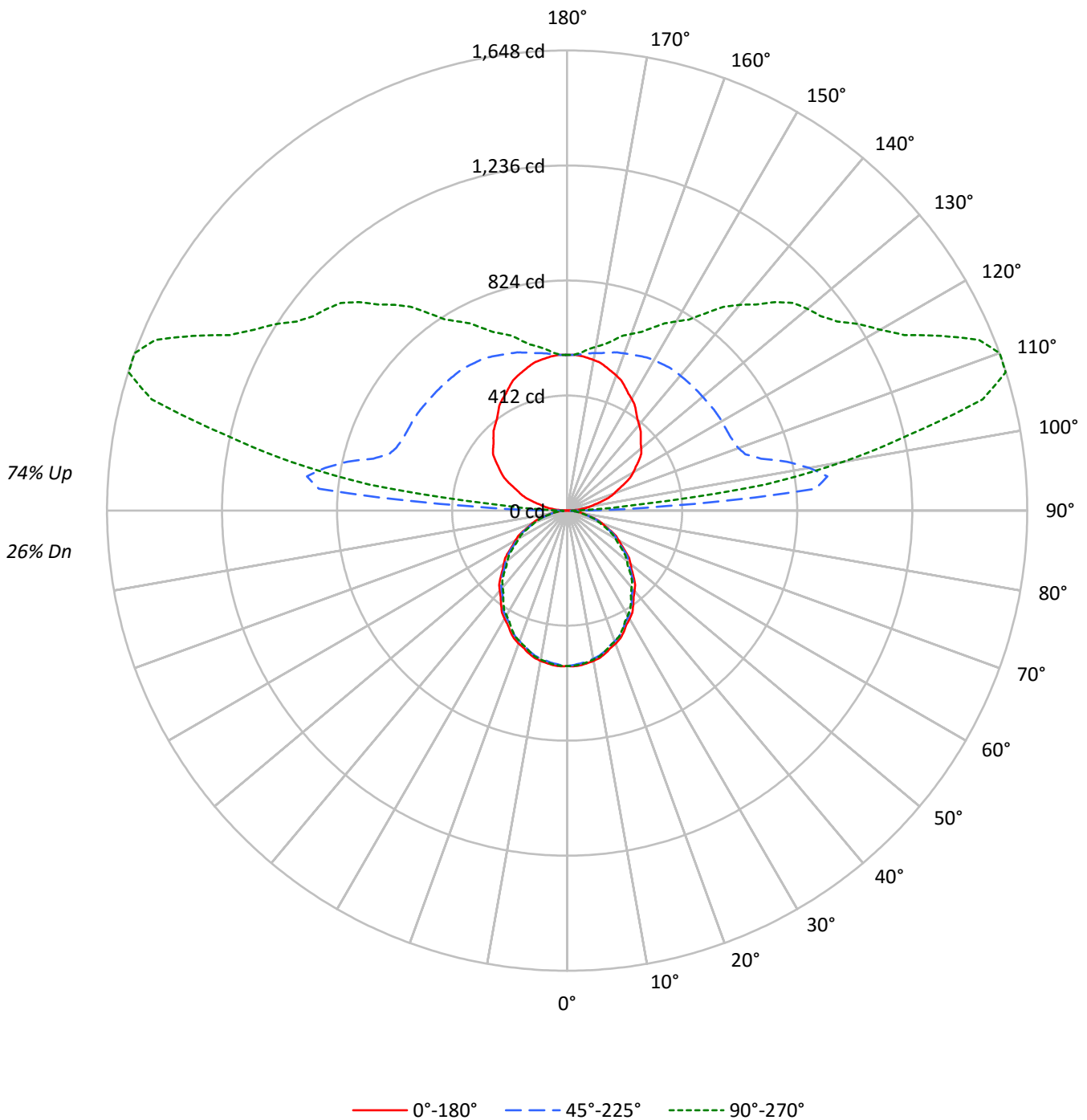
Input Watts (W): 42.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	101	101	101	90	90	90	90	70	70	70	51	51	51	34	34	34	26
1	92	88	84	81	82	79	76	73	61	59	57	45	44	43	30	29	29	22
2	84	77	71	66	75	69	64	60	54	50	47	39	37	35	26	25	24	18
3	77	68	61	55	68	61	55	50	47	43	40	35	32	30	23	22	21	16
4	70	60	52	46	62	54	47	42	42	37	34	31	28	26	21	19	18	13
5	64	53	45	39	57	48	41	36	37	33	29	28	25	22	19	17	15	12
6	59	47	40	34	52	43	36	31	33	29	25	25	22	19	17	15	13	10
7	54	43	35	30	48	38	32	27	30	25	22	23	19	17	16	13	12	9
8	50	39	31	26	45	35	28	24	27	23	19	21	17	15	14	12	11	8
9	47	35	28	23	42	32	25	21	25	20	17	19	16	13	13	11	10	7
10	44	32	25	20	39	29	23	19	23	18	15	17	14	12	12	10	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4495	4495	4495
5°	4508	4454	4486
10°	4480	4418	4440
15°	4425	4355	4367
20°	4354	4277	4281
25°	4272	4188	4177
30°	4172	4084	4047
35°	4066	3975	3921
40°	3958	3851	3780
45°	3846	3729	3658
50°	3720	3620	3508
55°	3586	3478	3365
60°	3450	3321	3219
65°	3299	3171	3043
70°	3127	2969	2854
75°	2866	2729	2658
80°	2552	2450	2385
85°	2232	2149	2103



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.4	1.0
10°-20°	147.7	2.7
20°-30°	217.4	4.0
30°-40°	252.8	4.6
40°-50°	252.8	4.6
50°-60°	221.1	4.0
60°-70°	164.2	3.0
70°-80°	93.3	1.7
80°-90°	30.0	0.5
90°-100°	402.7	7.3
100°-110°	838.0	15.3
110°-120°	750.6	13.7
120°-130°	631.4	11.5
130°-140°	526.5	9.6
140°-150°	402.2	7.3
150°-160°	282.7	5.2
160°-170°	166.3	3.0
170°-180°	54.1	1.0
0°-30°	417.6	7.6
0°-40°	670.4	12.2
0°-60°	1144.3	20.9
0°-90°	1431.8	26.1
90°-120°	1991.3	36.3
90°-150°	3551.4	64.7
90°-180°	4054.0	73.9
0°-180°	5486.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	557	557	557	557	557	
5°	556	554	550	554	554	53
15°	530	528	521	524	522	149
25°	480	476	470	471	469	221
35°	413	409	403	400	398	258
45°	337	333	327	322	320	260
55°	255	253	247	242	239	228
65°	173	170	166	162	159	171
75°	92	90	88	86	85	98
85°	24	24	23	23	23	27
90°	1	9	20	22	23	3
95°	36	114	893	442	267	40
105°	128	186	718	1547	1541	137
115°	226	283	641	1231	1480	224
125°	314	374	637	1048	1181	280
135°	373	445	632	930	1056	289
145°	430	493	629	784	862	270
155°	490	528	611	692	722	226
165°	533	550	586	620	630	151
175°	556	558	562	570	567	53
180°	558	558	558	558	558	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	556.8	556.8	556.8	556.8	556.8	556.8	556.8	556.8	556.8	556.8	556.8
2.5°	558.2	558.0	557.7	557.5	557.2	556.7	555.8	555.0	554.1	553.2	554.0
5°	556.3	555.9	555.5	555.2	554.8	554.0	552.9	551.9	550.7	549.6	550.7
7.5°	551.2	550.7	550.4	550.0	549.6	548.7	547.5	546.4	545.2	543.9	544.8
10°	546.5	546.1	545.7	545.4	545.0	544.1	542.8	541.5	540.3	538.9	539.7
12.5°	540.5	540.1	539.7	539.2	538.9	538.0	536.6	535.3	533.9	532.5	533.4
15°	529.5	529.1	528.8	528.4	528.0	527.1	525.6	524.1	522.5	521.1	521.7
17.5°	516.4	515.9	515.5	515.0	514.4	513.5	512.1	510.7	509.3	507.8	508.2
20°	506.8	506.3	505.9	505.3	504.8	503.9	502.4	500.9	499.4	497.9	498.2
22.5°	496.4	495.8	495.1	494.5	493.8	492.8	491.3	489.8	488.3	486.8	487.4
25°	479.6	478.9	478.2	477.5	476.8	475.8	474.4	473.0	471.6	470.2	470.3
27.5°	460.3	459.6	458.9	458.2	457.5	456.5	455.2	453.9	452.6	451.3	451.1
30°	447.5	446.7	445.9	445.1	444.3	443.3	442.0	440.6	439.4	438.1	437.7
32.5°	433.9	433.2	432.4	431.8	431.0	430.0	428.7	427.3	425.9	424.5	424.0
35°	412.6	412.0	411.3	410.6	409.9	408.9	407.5	406.0	404.7	403.3	402.7
37.5°	390.3	389.6	389.0	388.4	387.8	386.7	385.2	383.7	382.2	380.7	379.9
40°	375.6	374.8	374.1	373.2	372.5	371.4	369.9	368.3	366.8	365.4	364.4
42.5°	360.0	359.5	359.0	358.5	358.1	356.9	355.3	353.6	352.0	350.4	349.2
45°	336.9	336.1	335.5	334.8	334.0	332.9	331.3	329.7	328.2	326.6	325.5
47.5°	312.6	312.2	311.7	311.2	310.8	309.8	308.3	306.8	305.4	303.9	302.7
50°	296.2	295.9	295.5	295.0	294.6	293.8	292.4	291.0	289.5	288.2	286.8
52.5°	280.2	279.7	279.2	278.7	278.2	277.3	275.8	274.4	272.9	271.5	270.2
55°	254.8	254.5	254.1	253.8	253.5	252.7	251.3	250.0	248.5	247.1	246.0
57.5°	230.5	230.2	229.8	229.5	229.1	228.3	226.9	225.6	224.1	222.8	221.7
60°	213.7	213.2	212.7	212.2	211.7	210.8	209.5	208.2	207.0	205.7	204.8
62.5°	197.3	196.9	196.4	196.0	195.6	194.7	193.3	192.0	190.6	189.3	188.4
65°	172.7	172.2	171.6	171.2	170.7	169.9	168.9	168.0	166.9	166.0	164.9
67.5°	147.9	147.4	146.9	146.5	146.0	145.3	144.4	143.5	142.5	141.5	140.5
70°	132.5	131.8	131.1	130.4	129.7	128.9	128.2	127.4	126.6	125.8	125.0
72.5°	116.1	115.4	114.7	114.0	113.3	112.6	112.0	111.4	110.7	110.1	109.4
75°	91.9	91.4	91.0	90.4	89.9	89.4	89.0	88.4	87.9	87.5	87.1
77.5°	68.8	68.6	68.3	68.1	68.0	67.6	67.2	66.7	66.3	65.9	65.7
80°	54.9	54.6	54.3	54.0	53.7	53.4	53.3	53.1	52.9	52.7	52.4
82.5°	41.3	41.2	41.0	40.9	40.7	40.6	40.6	40.6	40.5	40.5	40.4
85°	24.1	24.1	24.1	24.1	24.1	24.0	23.8	23.6	23.4	23.2	23.2
87.5°	9.5	9.9	10.5	10.6	10.7	10.7	11.9	11.8	12.2	12.5	12.3
90°	1.1	3.3	6.6	7.6	8.8	8.8	15.4	15.4	17.5	19.7	18.7
92.5°	12.4	18.2	28.5	41.8	57.9	80.6	136.3	221.2	304.1	347.4	289.4
95°	36.1	39.4	50.4	64.7	90.9	137.0	232.1	411.8	673.5	892.6	917.8
97.5°	64.8	64.8	74.3	87.4	110.0	148.5	221.9	370.2	630.4	940.2	1153.1
100°	83.2	83.2	90.9	104.1	124.9	159.9	224.5	348.3	571.7	880.5	1160.9
102.5°	100.8	102.5	109.3	121.6	141.5	174.8	233.3	342.1	532.3	806.1	1095.2
105°	128.2	131.4	137.0	150.1	169.8	201.5	254.1	345.0	498.3	718.5	975.8
107.5°	158.3	160.5	166.1	180.0	198.9	230.3	278.4	361.2	492.2	669.4	879.5
110°	178.5	180.7	186.2	199.3	219.0	248.6	296.8	373.4	494.0	652.8	831.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	197.8	200.0	206.3	218.6	238.4	267.9	314.3	386.6	499.2	644.9	804.1
115°	225.6	228.9	236.6	247.5	268.3	297.9	341.7	407.5	509.3	640.7	778.7
117.5°	254.5	257.6	264.4	276.4	296.0	326.6	368.3	428.7	520.0	639.6	767.3
120°	273.8	276.0	283.7	295.7	314.3	345.0	386.6	443.6	527.9	639.6	761.2
122.5°	291.3	293.5	301.2	312.4	332.7	362.5	404.2	457.6	535.8	638.8	754.2
125°	314.3	318.7	325.3	337.3	358.2	388.8	428.2	478.6	547.6	637.4	742.5
127.5°	334.7	338.2	346.1	359.9	381.5	412.5	450.5	496.8	557.0	635.0	727.0
130°	346.1	350.4	359.2	375.7	396.4	428.2	465.5	508.2	564.0	634.1	717.4
132.5°	357.5	361.0	372.4	388.0	410.5	440.5	477.8	519.6	570.1	633.3	708.6
135°	373.4	377.9	388.8	407.5	430.5	458.9	495.0	534.5	579.4	632.0	695.5
137.5°	389.5	393.6	405.7	423.4	447.3	474.5	508.2	545.0	584.8	631.7	684.1
140°	400.9	404.2	416.2	434.8	457.8	484.1	517.0	552.0	589.3	630.8	678.0
142.5°	413.1	416.4	427.5	445.4	467.4	492.9	524.8	557.2	592.8	630.8	672.7
145°	430.5	433.8	444.7	460.0	480.8	504.9	533.4	563.0	594.7	628.7	663.7
147.5°	449.9	451.0	460.6	476.5	493.7	515.4	542.2	568.0	595.8	624.7	655.6
150°	462.2	463.3	472.0	485.2	501.6	522.5	546.5	570.6	595.8	622.1	649.5
152.5°	473.5	473.8	482.6	494.8	509.5	528.6	550.1	572.4	594.1	617.7	642.4
155°	489.6	490.7	497.2	508.2	520.3	536.7	555.3	573.9	591.4	611.1	632.0
157.5°	505.1	505.1	511.2	519.8	530.3	543.3	559.0	573.9	588.6	604.4	621.2
160°	514.7	514.7	519.2	526.8	535.6	547.6	560.7	573.9	586.0	599.1	613.3
162.5°	523.5	522.6	526.1	532.9	540.8	550.3	562.5	573.9	583.3	593.8	606.3
165°	533.4	533.4	535.6	541.0	546.5	553.1	563.0	571.7	578.2	586.0	594.7
167.5°	543.3	542.2	543.3	547.4	550.4	555.5	562.7	569.1	573.1	578.1	584.2
170°	547.6	546.5	547.6	550.9	553.1	556.4	561.8	567.3	569.5	572.8	577.2
172.5°	552.0	550.9	551.1	553.6	554.9	557.2	561.0	565.6	566.0	567.5	571.1
175°	556.4	555.3	555.3	556.4	557.5	557.5	559.7	563.0	561.8	561.8	564.0
177.5°	558.4	557.5	556.6	557.5	557.5	557.5	558.4	560.1	558.4	558.4	559.2
180°	557.5	557.5	557.5	557.5	557.5	557.5	557.5	557.5	557.5	557.5	557.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	556.8	556.8	556.8	556.8	556.8	556.8	556.8	556.8
2.5°	554.8	555.6	556.4	556.8	556.7	556.6	556.5	556.4
5°	551.9	552.9	554.0	554.4	554.2	554.0	553.8	553.6
7.5°	545.6	546.6	547.4	547.8	547.7	547.5	547.4	547.3
10°	540.5	541.3	542.2	542.4	542.2	542.0	541.8	541.6
12.5°	534.2	535.1	536.0	536.3	536.0	535.7	535.5	535.2
15°	522.3	522.8	523.5	523.6	523.3	523.0	522.7	522.5
17.5°	508.6	509.0	509.3	509.4	509.3	509.1	508.9	508.7
20°	498.5	498.8	499.1	499.2	498.9	498.7	498.5	498.3
22.5°	487.9	488.4	489.0	489.1	488.7	488.3	488.0	487.7
25°	470.4	470.5	470.6	470.5	470.0	469.7	469.3	468.9
27.5°	450.8	450.6	450.3	450.0	449.5	449.0	448.5	448.0
30°	437.3	437.0	436.5	436.1	435.5	435.1	434.6	434.1
32.5°	423.6	423.1	422.6	422.2	421.7	421.1	420.7	420.2
35°	401.9	401.2	400.5	399.9	399.4	399.0	398.4	397.9
37.5°	379.2	378.4	377.7	377.0	376.4	375.7	375.0	374.4
40°	363.4	362.4	361.5	360.7	360.1	359.7	359.2	358.7
42.5°	348.1	346.9	345.8	345.1	344.7	344.4	344.0	343.7
45°	324.4	323.3	322.3	321.5	321.2	320.9	320.7	320.4
47.5°	301.4	300.2	299.0	298.0	297.3	296.5	295.8	295.0
50°	285.4	284.1	282.7	281.6	281.1	280.5	279.8	279.3
52.5°	269.0	267.8	266.6	265.5	264.8	264.0	263.3	262.5
55°	244.8	243.6	242.4	241.5	240.9	240.3	239.7	239.1
57.5°	220.6	219.4	218.3	217.4	216.9	216.3	215.7	215.1
60°	203.9	203.0	202.1	201.4	201.0	200.4	199.9	199.4
62.5°	187.7	186.8	186.0	185.3	184.8	184.4	183.9	183.3
65°	164.0	163.0	162.0	161.3	160.8	160.2	159.8	159.3
67.5°	139.6	138.6	137.7	137.1	137.0	136.9	136.8	136.6
70°	124.2	123.5	122.6	122.1	121.8	121.5	121.2	120.9
72.5°	108.9	108.2	107.5	107.1	106.8	106.5	106.2	105.9
75°	86.6	86.2	85.9	85.6	85.5	85.4	85.3	85.2
77.5°	65.6	65.5	65.4	65.2	64.9	64.7	64.4	64.2
80°	52.2	52.0	51.8	51.7	51.6	51.5	51.4	51.3
82.5°	40.2	40.2	40.1	40.0	39.9	39.7	39.6	39.5
85°	23.2	23.2	23.2	23.2	23.1	23.0	22.8	22.7
87.5°	12.5	12.7	12.9	12.9	13.2	13.4	13.2	13.2
90°	19.7	20.8	21.9	21.9	23.0	24.1	23.0	23.0
92.5°	215.1	161.8	128.8	106.9	94.0	88.0	84.4	84.4
95°	811.5	641.8	495.0	388.8	335.2	301.2	281.4	267.2
97.5°	1199.1	1136.0	1028.9	914.5	835.8	770.0	737.1	714.4
100°	1320.9	1342.7	1289.1	1208.1	1112.8	1045.9	1013.1	1004.4
102.5°	1314.8	1423.3	1438.9	1405.1	1346.7	1298.3	1263.7	1256.7
105°	1226.6	1416.2	1524.6	1569.4	1571.7	1562.9	1547.6	1541.0
107.5°	1101.5	1303.3	1456.0	1553.7	1607.8	1632.8	1643.7	1646.6
110°	1026.2	1215.7	1374.5	1495.0	1572.7	1618.7	1638.5	1648.3



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CATALOG NUMBER: S124DIP-S350D1205U830-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	971.0	1138.6	1288.6	1409.1	1497.4	1553.0	1580.6	1596.7
115°	915.6	1050.4	1178.5	1283.6	1370.2	1435.9	1470.9	1479.7
117.5°	888.4	999.9	1100.7	1189.9	1263.7	1318.9	1354.3	1361.1
120°	876.2	978.1	1065.6	1143.4	1205.9	1254.1	1282.5	1294.6
122.5°	865.6	964.0	1043.8	1111.9	1164.7	1205.9	1229.9	1242.0
125°	847.7	941.9	1017.5	1077.7	1121.5	1153.3	1174.1	1180.6
127.5°	825.8	915.9	991.2	1048.4	1092.4	1120.7	1138.2	1144.7
130°	808.3	894.8	969.3	1027.4	1072.2	1099.6	1117.1	1123.7
132.5°	789.9	871.2	943.9	1001.9	1045.9	1076.9	1093.4	1100.0
135°	764.5	835.7	902.5	957.2	1001.1	1031.7	1049.2	1055.8
137.5°	741.5	801.7	858.0	907.5	948.5	978.7	993.2	1001.1
140°	728.3	779.8	829.1	875.1	913.4	937.5	952.8	961.6
142.5°	716.0	761.4	803.7	843.6	877.5	899.8	913.4	919.5
145°	698.8	736.0	768.8	799.6	826.9	845.6	856.5	862.0
147.5°	684.6	714.1	740.4	764.5	784.7	800.6	809.0	810.9
150°	675.8	701.0	722.8	742.5	760.1	774.3	780.9	782.0
152.5°	666.1	687.8	707.9	724.2	739.0	750.6	754.6	755.7
155°	651.7	669.2	685.6	698.8	709.7	718.5	721.8	721.8
157.5°	636.1	650.8	664.6	675.1	683.4	690.0	692.0	692.0
160°	626.5	638.5	650.5	659.3	665.9	672.5	673.5	673.5
162.5°	616.8	627.2	636.6	644.4	649.2	655.8	657.0	656.0
165°	603.5	610.0	617.7	623.2	627.5	632.0	630.8	629.8
167.5°	590.6	595.6	601.7	605.0	607.2	610.0	609.8	609.0
170°	582.7	586.0	590.3	593.6	595.8	596.9	595.8	595.8
172.5°	575.6	578.1	580.7	583.1	584.4	585.5	584.4	582.7
175°	566.3	567.3	569.5	569.5	569.5	571.7	569.5	567.3
177.5°	560.1	561.0	561.0	561.8	561.0	561.8	560.1	558.4
180°	557.5	557.5	557.5	557.5	557.5	557.5	557.5	557.5

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