

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: P332924

Luminaire Tested: **S124RDIP-S575D1205U835-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332924  
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: S124RDIP-S575D1205U835-4F0-1E-UDD-F4  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 1205 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6652.9 lumens  
Efficiency: N/A  
Efficacy: 134.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

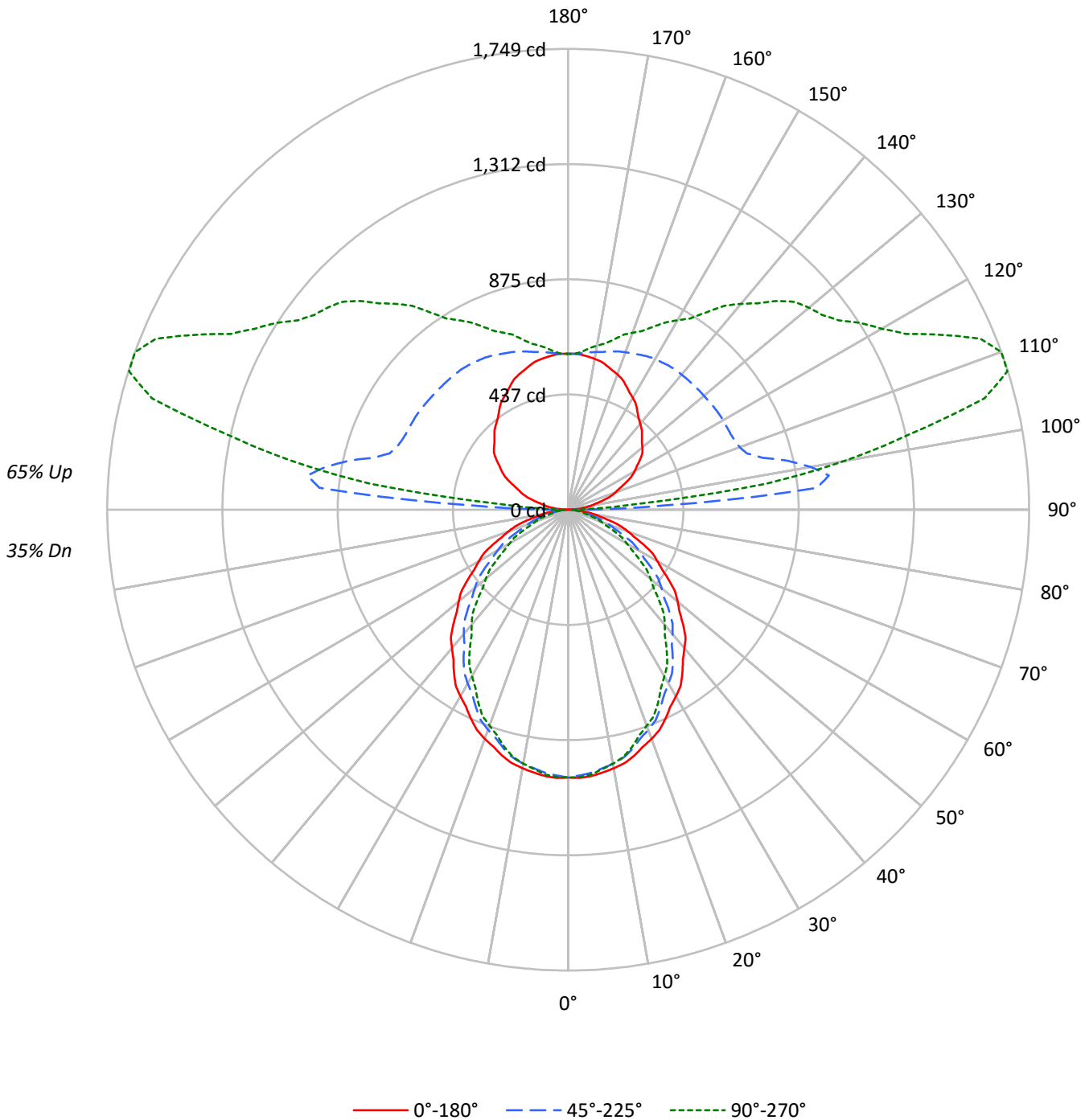
Input Watts (W): 49.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	75	75	75	58	58	58	43	43	43	35
1	95	91	87	83	85	82	79	76	66	64	62	51	50	49	38	37	36	30
2	86	79	73	68	78	72	67	63	58	55	52	45	43	41	34	32	31	26
3	79	70	63	57	71	63	57	52	51	47	44	40	37	35	30	28	26	22
4	72	62	54	48	65	56	50	45	46	41	37	36	33	30	27	25	23	19
5	66	55	47	41	60	50	43	38	41	36	32	32	29	26	24	22	20	16
6	61	49	41	36	55	45	38	33	37	32	28	29	26	23	22	20	18	15
7	56	44	37	31	51	41	34	29	33	28	25	27	23	20	20	18	16	13
8	52	40	33	28	47	37	30	26	30	25	22	24	21	18	18	16	14	12
9	49	37	29	25	44	34	27	23	28	23	19	22	19	16	17	15	13	11
10	45	34	27	22	41	31	25	20	26	21	17	21	17	15	16	13	12	10

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

	0°	45°	90°
0°	8205	8205	8205
5°	8223	8122	8173
10°	8171	8025	8025
15°	8078	7856	7798
20°	7948	7635	7494
25°	7784	7375	7187
30°	7623	7101	6804
35°	7447	6818	6419
40°	7233	6495	6003
45°	7036	6174	5579
50°	6812	5805	5130
55°	6572	5422	4643
60°	6307	5000	4146
65°	6065	4474	3656
70°	5712	3895	3104
75°	5268	3228	2523
80°	4593	2459	2315
85°	3890	2232	2093



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	95.5	1.4
10°-20°	266.2	4.0
20°-30°	384.4	5.8
30°-40°	435.7	6.5
40°-50°	420.8	6.3
50°-60°	349.9	5.3
60°-70°	241.6	3.6
70°-80°	122.5	1.8
80°-90°	34.7	0.5
90°-100°	427.2	6.4
100°-110°	889.1	13.4
110°-120°	796.4	12.0
120°-130°	669.9	10.1
130°-140°	558.5	8.4
140°-150°	426.7	6.4
150°-160°	299.9	4.5
160°-170°	176.4	2.7
170°-180°	57.4	0.9
0°-30°	746.1	11.2
0°-40°	1181.8	17.8
0°-60°	1952.5	29.3
0°-90°	2351.3	35.3
90°-120°	2112.7	31.8
90°-150°	3767.8	56.6
90°-180°	4302.0	64.7
0°-180°	6652.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1016	1016	1016	1016	1016	
5°	1015	1011	1002	1010	1008	96
15°	966	959	940	938	933	272
25°	874	859	828	815	807	402
35°	756	730	692	666	651	472
45°	616	586	541	504	489	475
55°	467	435	385	346	330	418
65°	318	283	234	202	191	313
75°	169	140	104	86	81	178
85°	42	27	24	23	23	47
90°	1	9	21	23	24	4
95°	38	121	947	469	284	43
105°	136	197	762	1641	1635	145
115°	239	300	680	1306	1570	237
125°	334	396	676	1111	1253	297
135°	396	472	670	987	1120	306
145°	457	523	667	832	914	287
155°	519	561	648	734	766	239
165°	566	583	622	658	668	160
175°	590	592	596	604	602	56
180°	592	592	592	592	592	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3
2.5°	1018.8	1018.2	1017.7	1017.1	1016.6	1015.5	1014.0	1012.5	1010.9	1009.4	1010.9
5°	1014.7	1014.0	1013.3	1012.6	1012.0	1010.6	1008.5	1006.4	1004.3	1002.3	1004.0
7.5°	1005.5	1004.8	1004.1	1003.4	1002.6	1000.9	998.2	995.5	992.8	990.1	991.2
10°	996.8	996.0	995.1	994.2	993.4	991.4	988.3	985.1	982.0	978.9	979.6
12.5°	985.6	984.6	983.6	982.6	981.6	979.3	975.6	971.9	968.3	964.6	965.0
15°	966.5	964.9	963.4	961.8	960.2	957.3	953.0	948.7	944.3	940.0	939.7
17.5°	943.3	941.0	938.8	936.5	934.3	930.6	925.4	920.2	915.0	909.8	908.9
20°	925.2	923.0	920.7	918.5	916.2	912.2	906.3	900.4	894.5	888.7	887.3
22.5°	905.3	902.8	900.3	897.7	895.2	890.8	884.5	878.2	871.9	865.6	863.5
25°	873.9	870.8	867.6	864.5	861.4	856.3	849.2	842.1	835.0	828.0	825.0
27.5°	840.9	837.0	833.1	829.2	825.2	819.5	811.9	804.4	796.8	789.2	785.6
30°	817.8	813.5	809.2	804.9	800.6	794.3	786.2	778.1	769.9	761.8	757.5
32.5°	793.6	788.7	783.8	778.9	774.1	767.4	759.0	750.6	742.2	733.8	728.8
35°	755.6	750.1	744.5	739.0	733.5	726.4	717.7	709.1	700.4	691.8	685.9
37.5°	715.0	709.3	703.6	697.9	692.1	684.5	674.9	665.3	655.8	646.2	639.6
40°	686.3	680.6	674.9	669.2	663.5	655.7	645.9	636.0	626.2	616.3	609.0
42.5°	658.9	653.0	647.0	641.0	635.0	626.9	616.6	606.3	596.1	585.8	578.4
45°	616.3	609.9	603.5	597.1	590.7	582.3	571.9	561.6	551.2	540.8	532.3
47.5°	572.3	565.7	559.0	552.4	545.8	537.1	526.3	515.6	504.8	494.0	485.2
50°	542.4	535.6	528.9	522.1	515.4	506.5	495.4	484.4	473.3	462.2	453.6
52.5°	511.9	505.3	498.7	492.1	485.4	476.5	465.1	453.8	442.4	431.1	422.3
55°	466.9	460.0	453.1	446.1	439.2	430.1	418.9	407.7	396.4	385.2	376.2
57.5°	422.4	415.2	408.0	400.8	393.6	384.5	373.4	362.3	351.3	340.2	331.1
60°	390.6	383.7	376.8	369.9	363.0	354.0	342.9	331.8	320.8	309.7	300.7
62.5°	362.0	354.8	347.6	340.4	333.2	324.0	312.6	301.3	289.9	278.6	270.3
65°	317.5	310.1	302.6	295.2	287.7	278.5	267.4	256.4	245.3	234.2	226.8
67.5°	271.3	264.1	257.0	249.9	242.8	234.1	223.8	213.5	203.3	193.0	186.6
70°	242.0	234.7	227.5	220.2	213.0	204.4	194.5	184.7	174.8	165.0	159.3
72.5°	210.9	204.3	197.7	191.2	184.6	176.7	167.4	158.1	148.7	139.4	134.6
75°	168.9	162.5	156.1	149.7	143.3	136.0	127.9	119.7	111.6	103.5	99.5
77.5°	126.2	120.8	115.4	109.9	104.5	98.5	91.9	85.4	78.8	72.2	69.9
80°	98.8	93.8	88.8	83.8	78.8	73.7	68.5	63.3	58.1	52.9	52.4
82.5°	75.2	70.6	66.0	61.4	56.8	53.0	50.0	47.0	44.1	41.1	40.7
85°	42.0	38.6	35.1	31.6	28.2	26.2	25.7	25.2	24.6	24.1	23.8
87.5°	14.6	13.9	13.5	12.6	11.8	11.1	12.4	12.2	12.6	12.9	12.5
90°	1.2	3.5	7.0	8.1	9.3	9.3	16.3	16.3	18.6	20.9	19.8
92.5°	13.2	19.3	30.2	44.4	61.4	85.5	144.6	234.7	322.6	368.6	307.0
95°	38.3	41.8	53.5	68.6	96.4	145.3	246.3	436.9	714.6	947.0	973.8
97.5°	68.8	68.8	78.8	92.7	116.7	157.6	235.4	392.8	668.8	997.5	1223.4
100°	88.3	88.3	96.4	110.4	132.5	169.7	238.2	369.5	606.6	934.2	1231.7
102.5°	106.9	108.8	116.0	129.0	150.1	185.5	247.5	363.0	564.7	855.2	1162.0
105°	136.0	139.4	145.3	159.2	180.1	213.8	269.6	366.0	528.7	762.3	1035.3
107.5°	168.0	170.3	176.2	191.0	211.0	244.3	295.4	383.2	522.2	710.2	933.1
110°	189.4	191.7	197.5	211.5	232.4	263.8	314.9	396.2	524.1	692.6	882.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	209.9	212.2	218.9	231.9	252.9	284.2	333.5	410.2	529.6	684.2	853.1
115°	239.4	242.9	251.0	262.6	284.7	316.1	362.5	432.3	540.3	679.8	826.2
117.5°	270.0	273.3	280.5	293.3	314.0	346.5	390.7	454.8	551.7	678.6	814.1
120°	290.5	292.8	301.0	313.7	333.5	366.0	410.2	470.6	560.1	678.6	807.6
122.5°	309.1	311.4	319.6	331.4	353.0	384.6	428.8	485.5	568.5	677.7	800.2
125°	333.5	338.1	345.1	357.9	380.0	412.5	454.3	507.8	581.0	676.3	787.8
127.5°	355.1	358.8	367.2	381.8	404.8	437.6	478.0	527.1	591.0	673.7	771.3
130°	367.2	371.8	381.1	398.6	420.6	454.3	493.9	539.2	598.4	672.8	761.1
132.5°	379.3	383.0	395.1	411.6	435.5	467.4	506.9	551.3	604.9	671.9	751.8
135°	396.2	400.9	412.5	432.3	456.7	486.9	525.2	567.1	614.7	670.5	737.9
137.5°	413.2	417.6	430.4	449.2	474.6	503.4	539.2	578.2	620.5	670.2	725.8
140°	425.3	428.8	441.6	461.3	485.7	513.6	548.5	585.6	625.2	669.3	719.3
142.5°	438.3	441.8	453.6	472.5	495.9	522.9	556.8	591.2	628.9	669.3	713.7
145°	456.7	460.2	471.8	488.0	510.1	535.7	565.9	597.3	631.0	667.0	704.2
147.5°	477.3	478.5	488.7	505.5	523.8	546.8	575.2	602.6	632.1	662.8	695.6
150°	490.4	491.5	500.8	514.8	532.2	554.3	579.8	605.4	632.1	660.0	689.1
152.5°	502.4	502.7	512.0	525.0	540.6	560.8	583.6	607.3	630.3	655.4	681.6
155°	519.4	520.6	527.5	539.2	552.0	569.4	589.1	608.9	627.5	648.4	670.5
157.5°	535.9	535.9	542.4	551.5	562.6	576.4	593.1	608.9	624.5	641.2	659.1
160°	546.1	546.1	550.8	558.9	568.2	581.0	594.9	608.9	621.7	635.6	650.7
162.5°	555.4	554.5	558.2	565.4	573.8	583.8	596.8	608.9	618.9	630.0	643.3
165°	565.9	565.9	568.2	574.0	579.8	586.8	597.3	606.6	613.5	621.7	631.0
167.5°	576.4	575.2	576.4	580.8	584.0	589.4	597.0	603.8	608.0	613.3	619.8
170°	581.0	579.8	581.0	584.5	586.8	590.3	596.1	601.9	604.2	607.7	612.4
172.5°	585.6	584.5	584.7	587.3	588.7	591.2	595.2	600.1	600.5	602.1	605.9
175°	590.3	589.1	589.1	590.3	591.5	591.5	593.8	597.3	596.1	596.1	598.4
177.5°	592.4	591.5	590.5	591.5	591.5	591.5	592.4	594.2	592.4	592.4	593.3
180°	591.5	591.5	591.5	591.5	591.5	591.5	591.5	591.5	591.5	591.5	591.5



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3
2.5°	1012.5	1014.0	1015.5	1016.2	1016.1	1015.9	1015.8	1015.7
5°	1005.7	1007.5	1009.2	1009.9	1009.5	1009.2	1008.8	1008.5
7.5°	992.3	993.4	994.6	994.8	994.3	993.7	993.2	992.6
10°	980.3	981.0	981.7	981.7	981.0	980.3	979.6	978.9
12.5°	965.4	965.8	966.3	966.0	965.0	964.1	963.1	962.1
15°	939.3	939.0	938.6	937.9	936.6	935.4	934.2	933.0
17.5°	907.9	906.9	905.9	904.5	902.7	900.9	899.0	897.2
20°	885.9	884.5	883.1	881.3	879.1	876.8	874.6	872.3
22.5°	861.5	859.4	857.3	855.4	853.5	851.7	849.9	848.0
25°	822.1	819.1	816.2	813.9	812.1	810.4	808.7	806.9
27.5°	781.9	778.3	774.7	771.6	769.1	766.6	764.2	761.7
30°	753.2	748.8	744.5	741.0	738.2	735.4	732.7	729.9
32.5°	723.8	718.8	713.7	709.9	707.3	704.7	702.0	699.4
35°	680.0	674.1	668.3	663.8	660.7	657.5	654.4	651.3
37.5°	633.0	626.5	619.9	615.1	611.9	608.8	605.7	602.6
40°	601.8	594.5	587.2	582.1	578.9	575.8	572.7	569.6
42.5°	571.0	563.6	556.2	550.9	547.6	544.4	541.1	537.9
45°	523.9	515.4	506.9	501.1	498.0	494.9	491.8	488.7
47.5°	476.4	467.6	458.8	452.7	449.3	445.9	442.5	439.0
50°	444.9	436.3	427.6	421.7	418.4	415.1	411.8	408.5
52.5°	413.5	404.7	396.0	389.9	386.4	383.0	379.6	376.2
55°	367.2	358.2	349.2	343.1	339.8	336.5	333.2	329.9
57.5°	321.9	312.8	303.7	297.9	295.4	292.9	290.4	287.9
60°	291.7	282.7	273.7	267.9	265.1	262.3	259.6	256.8
62.5°	262.0	253.7	245.4	240.1	237.9	235.7	233.5	231.3
65°	219.4	211.9	204.5	199.7	197.7	195.6	193.5	191.4
67.5°	180.2	173.8	167.4	163.1	160.8	158.5	156.2	153.9
70°	153.6	147.9	142.1	138.4	136.7	135.0	133.2	131.5
72.5°	129.7	124.8	119.9	116.7	115.1	113.5	111.9	110.3
75°	95.5	91.6	87.6	85.1	84.0	83.0	82.0	80.9
77.5°	67.6	65.3	62.9	61.6	61.3	61.0	60.7	60.4
80°	51.9	51.4	50.8	50.5	50.3	50.1	50.0	49.8
82.5°	40.3	39.9	39.6	39.3	39.1	38.9	38.8	38.6
85°	23.4	23.1	22.7	22.6	22.6	22.6	22.6	22.6
87.5°	12.6	12.7	12.8	12.8	13.2	13.6	13.5	13.6
90°	20.9	22.1	23.2	23.2	24.4	25.6	24.4	24.4
92.5°	228.2	171.7	136.7	113.4	99.7	93.4	89.5	89.5
95°	861.0	680.9	525.2	412.5	355.6	319.6	298.6	283.5
97.5°	1272.2	1205.2	1091.6	970.3	886.8	816.9	782.0	757.9
100°	1401.4	1424.6	1367.7	1281.7	1180.6	1109.7	1074.9	1065.6
102.5°	1394.9	1510.1	1526.6	1490.8	1428.8	1377.4	1340.7	1333.3
105°	1301.4	1502.5	1617.5	1665.1	1667.5	1658.2	1641.9	1634.9
107.5°	1168.7	1382.8	1544.8	1648.4	1705.8	1732.3	1743.9	1747.0
110°	1088.8	1289.8	1458.3	1586.1	1668.6	1717.4	1738.4	1748.8





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CATALOG NUMBER: S124RDIP-S575D1205U835-4F0-1E-UDD-F4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1030.2	1208.0	1367.2	1495.0	1588.7	1647.7	1677.0	1694.0
115°	971.4	1114.4	1250.3	1361.9	1453.7	1523.4	1560.6	1569.9
117.5°	942.6	1060.9	1167.8	1262.4	1340.7	1399.3	1436.9	1444.1
120°	929.6	1037.7	1130.6	1213.1	1279.4	1330.5	1360.7	1373.5
122.5°	918.4	1022.8	1107.4	1179.7	1235.7	1279.4	1304.9	1317.7
125°	899.4	999.3	1079.5	1143.4	1189.9	1223.6	1245.7	1252.6
127.5°	876.1	971.7	1051.6	1112.3	1159.0	1189.0	1207.6	1214.5
130°	857.6	949.4	1028.4	1090.0	1137.6	1166.6	1185.2	1192.2
132.5°	838.0	924.3	1001.4	1063.0	1109.7	1142.5	1160.1	1167.1
135°	811.1	886.6	957.5	1015.6	1062.1	1094.6	1113.2	1120.2
137.5°	786.7	850.6	910.3	962.8	1006.3	1038.4	1053.7	1062.1
140°	772.7	827.3	879.6	928.4	969.1	994.7	1010.9	1020.2
142.5°	759.7	807.8	852.7	895.0	931.0	954.7	969.1	975.6
145°	741.4	780.9	815.7	848.3	877.3	897.1	908.7	914.5
147.5°	726.3	757.6	785.5	811.1	832.5	849.4	858.3	860.3
150°	717.0	743.7	766.9	787.8	806.4	821.5	828.5	829.7
152.5°	706.7	729.7	751.1	768.3	784.1	796.4	800.6	801.8
155°	691.4	710.0	727.4	741.4	753.0	762.3	765.8	765.8
157.5°	674.9	690.5	705.1	716.3	725.1	732.1	734.2	734.2
160°	664.7	677.4	690.2	699.5	706.5	713.5	714.6	714.6
162.5°	654.4	665.4	675.4	683.7	688.8	695.8	697.0	696.0
165°	640.3	647.2	655.4	661.2	665.8	670.5	669.3	668.2
167.5°	626.6	631.9	638.4	641.9	644.2	647.2	647.0	646.1
170°	618.2	621.7	626.3	629.8	632.1	633.3	632.1	632.1
172.5°	610.7	613.3	616.1	618.6	620.0	621.2	620.0	618.2
175°	600.8	601.9	604.2	604.2	604.2	606.6	604.2	601.9
177.5°	594.2	595.2	595.2	596.1	595.2	596.1	594.2	592.4
180°	591.5	591.5	591.5	591.5	591.5	591.5	591.5	591.5

(END OF REPORT)