

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: P332285

Luminaire Tested: **S123RDIP-S560D805U835-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332285
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDIP-S560D805U835-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 805 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5345.7 lumens
Efficiency: N/A
Efficacy: 139.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Indirect

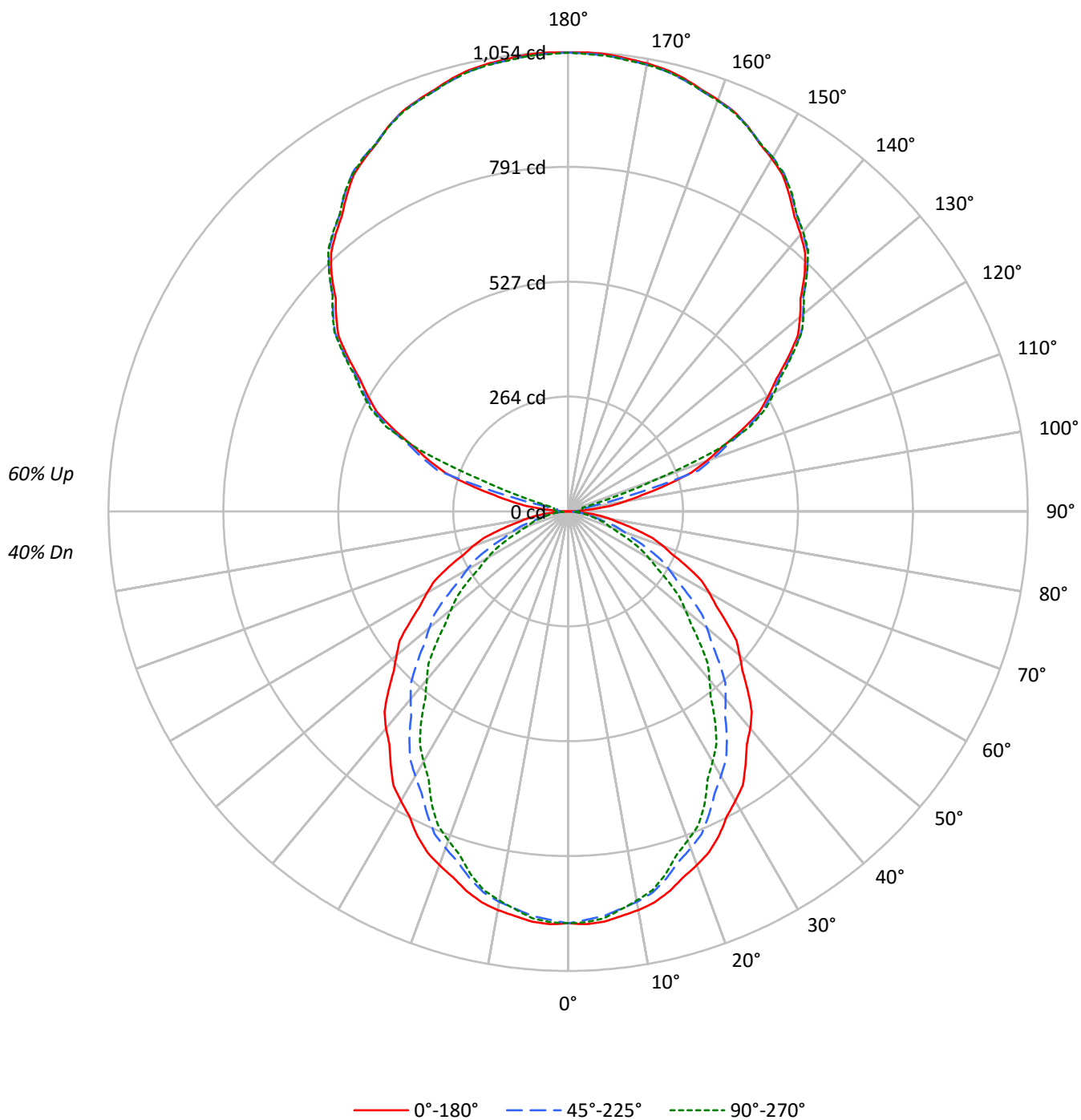
Input Watts (W): 38.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10		70	50	30	10		50	30	10		50	30	10		50	30	10
RCR																					
0	105	105	105	105		95	95	95	95		78	78	78		62	62	62		47	47	47
1	96	92	88	85		87	84	80	78		68	66	64		55	53	52		42	41	40
2	87	80	74	69		79	73	68	64		60	57	54		48	46	44		37	36	34
3	80	71	64	58		72	65	59	54		53	49	45		43	40	37		33	31	29
4	73	63	55	49		66	57	51	46		48	43	39		38	35	32		30	27	25
5	67	56	48	42		61	51	44	39		43	37	34		34	31	28		27	24	22
6	62	50	42	37		56	46	39	34		38	33	29		31	27	24		24	22	20
7	57	45	38	32		52	42	35	30		35	30	26		28	25	22		22	20	18
8	53	41	34	28		48	38	31	27		32	27	23		26	22	19		21	18	16
9	49	38	30	25		45	35	28	24		29	24	21		24	20	17		19	16	14
10	46	34	27	23		42	32	25	21		27	22	18		22	18	16		18	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10167	10167	10167
5°	10205	10065	10122
10°	10147	9939	9905
15°	10038	9706	9604
20°	9889	9415	9196
25°	9734	9089	8797
30°	9531	8712	8236
35°	9320	8335	7720
40°	9128	7890	7082
45°	8873	7451	6506
50°	8594	6953	5863
55°	8310	6382	5262
60°	8047	5772	4600
65°	7707	5112	3940
70°	7279	4293	3182
75°	6658	3377	2994
80°	5938	2994	2752
85°	5014	2643	2458

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.7	1.7
10°-20°	246.8	4.6
20°-30°	355.3	6.6
30°-40°	400.3	7.5
40°-50°	382.9	7.2
50°-60°	313.6	5.9
60°-70°	211.6	4.0
70°-80°	106.4	2.0
80°-90°	31.1	0.6
90°-100°	38.3	0.7
100°-110°	182.3	3.4
110°-120°	438.0	8.2
120°-130°	557.7	10.4
130°-140°	595.9	11.1
140°-150°	557.2	10.4
150°-160°	449.5	8.4
160°-170°	290.1	5.4
170°-180°	100.0	1.9
0°-30°	690.8	12.9
0°-40°	1091.1	20.4
0°-60°	1787.6	33.4
0°-90°	2136.7	40.0
90°-120°	658.6	12.3
90°-150°	2369.4	44.3
90°-180°	3209.0	60.0
0°-180°	5345.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	944	944	944	944	944	
5°	944	940	932	938	937	90
15°	901	892	871	867	862	254
25°	820	800	765	750	741	377
35°	709	681	634	602	588	444
45°	583	547	490	447	427	450
55°	443	404	340	297	280	397
65°	303	259	201	165	155	299
75°	160	123	81	74	72	171
85°	41	25	21	20	20	46
90°	1	9	19	22	24	4
95°	48	18	24	29	30	59
105°	233	237	171	41	34	247
115°	437	442	449	456	460	431
125°	616	622	625	627	629	550
135°	767	772	775	777	775	590
145°	885	890	892	894	894	554
155°	975	973	974	978	973	449
165°	1028	1026	1025	1031	1026	290
175°	1052	1049	1049	1054	1048	100
180°	1052	1052	1052	1052	1052	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	944.5	944.5	944.5	944.5	944.5	944.5	944.5	944.5	944.5	944.5	944.5
2.5°	947.6	947.0	946.5	945.9	945.4	944.3	942.7	941.0	939.4	937.8	939.3
5°	944.5	943.7	942.8	942.0	941.1	939.7	937.6	935.6	933.5	931.5	933.0
7.5°	935.8	934.9	933.9	933.0	932.1	930.3	927.7	925.0	922.3	919.7	920.5
10°	928.4	927.2	926.0	924.8	923.7	921.5	918.5	915.4	912.3	909.3	909.4
12.5°	918.0	916.7	915.3	914.0	912.7	910.2	906.4	902.7	898.9	895.2	895.1
15°	900.8	899.0	897.1	895.2	893.4	890.0	885.3	880.5	875.7	871.0	870.1
17.5°	879.2	877.1	874.9	872.7	870.5	866.4	860.3	854.3	848.2	842.2	840.4
20°	863.3	860.6	857.9	855.1	852.4	847.8	841.3	834.9	828.4	821.9	819.7
22.5°	845.5	842.4	839.3	836.1	833.0	828.0	821.1	814.2	807.4	800.5	797.7
25°	819.6	815.4	811.1	806.9	802.6	796.6	788.7	780.9	773.1	765.3	761.7
27.5°	788.2	783.5	778.8	774.1	769.4	762.7	754.0	745.3	736.6	727.9	722.9
30°	766.8	761.7	756.6	751.5	746.4	739.0	729.5	720.0	710.4	700.9	695.1
32.5°	745.3	739.6	733.8	728.0	722.2	714.3	704.2	694.1	684.0	673.9	667.6
35°	709.3	703.2	697.1	691.0	684.8	676.5	665.9	655.4	644.8	634.3	626.9
37.5°	672.9	666.1	659.3	652.4	645.6	636.6	625.3	614.1	602.8	591.5	583.2
40°	649.6	642.1	634.6	627.1	619.6	609.8	597.8	585.7	573.6	561.5	552.6
42.5°	623.2	615.7	608.3	600.8	593.3	583.3	570.8	558.3	545.8	533.3	523.6
45°	582.9	575.3	567.6	560.0	552.3	541.9	528.8	515.7	502.6	489.5	479.8
47.5°	542.6	534.2	525.8	517.4	509.0	498.3	485.1	472.0	458.9	445.8	435.3
50°	513.2	505.2	497.2	489.2	481.2	470.3	456.5	442.8	429.0	415.2	404.6
52.5°	486.9	478.2	469.5	460.8	452.2	441.0	427.3	413.7	400.0	386.4	375.4
55°	442.8	434.4	426.1	417.7	409.4	398.0	383.5	369.1	354.6	340.1	330.2
57.5°	402.0	392.9	383.8	374.7	365.6	353.8	339.3	324.8	310.2	295.7	286.4
60°	373.8	364.5	355.1	345.7	336.4	324.6	310.5	296.4	282.2	268.1	258.9
62.5°	345.6	336.3	326.9	317.5	308.2	296.4	282.3	268.2	254.0	239.9	231.3
65°	302.6	293.2	283.9	274.5	265.1	253.8	240.5	227.3	214.0	200.7	192.4
67.5°	259.5	250.1	240.6	231.1	221.7	210.6	197.8	185.1	172.4	159.6	153.4
70°	231.3	222.1	213.0	203.8	194.6	184.0	172.1	160.2	148.3	136.4	130.4
72.5°	203.1	194.1	185.0	176.0	166.9	157.0	146.2	135.3	124.5	113.7	108.8
75°	160.1	151.9	143.8	135.6	127.4	118.6	109.3	99.9	90.6	81.2	79.5
77.5°	120.9	113.5	106.1	98.7	91.3	84.6	78.6	72.6	66.5	60.5	59.6
80°	95.8	88.8	81.8	74.8	67.8	62.6	59.0	55.4	51.8	48.3	47.7
82.5°	71.9	65.8	59.8	53.8	47.7	43.9	42.2	40.6	38.9	37.2	36.7
85°	40.6	36.9	33.1	29.4	25.6	23.5	23.0	22.5	22.0	21.4	21.1
87.5°	14.9	13.7	12.6	11.4	10.3	9.9	10.4	10.8	11.3	11.7	11.7
90°	0.8	2.5	4.3	6.0	7.7	9.7	12.0	14.2	16.5	18.8	19.5
92.5°	14.5	14.1	13.6	13.1	12.6	13.2	14.9	16.6	18.3	20.0	21.1
95°	47.7	40.6	33.4	26.3	19.2	16.6	18.5	20.4	22.3	24.2	25.5
97.5°	95.8	92.7	89.5	86.3	83.1	75.2	62.7	50.2	37.7	25.2	26.6
100°	132.1	135.6	139.1	142.5	146.0	134.2	107.1	80.0	52.9	25.8	27.2
102.5°	173.4	175.9	178.4	180.9	183.4	169.9	140.3	110.6	81.0	51.4	47.1
105°	233.0	234.9	236.8	238.7	240.6	233.8	218.1	202.5	186.8	171.2	140.5
107.5°	295.8	297.4	298.9	300.4	301.9	303.9	306.4	308.9	311.3	313.8	291.3
110°	337.7	339.1	340.5	341.9	343.3	344.9	346.9	348.8	350.7	352.6	346.9

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	377.8	379.0	380.3	381.5	382.8	384.3	386.3	388.2	390.1	392.0	392.1
115°	437.0	438.1	439.1	440.2	441.2	442.5	444.1	445.6	447.2	448.8	450.5
117.5°	494.4	495.7	497.0	498.3	499.5	500.6	501.4	502.2	503.0	503.8	505.2
120°	530.1	531.6	533.2	534.7	536.3	537.4	537.9	538.4	538.9	539.4	540.8
122.5°	566.3	567.6	568.9	570.2	571.5	572.4	573.1	573.8	574.4	575.1	576.1
125°	616.1	617.4	618.8	620.2	621.6	622.7	623.4	624.0	624.7	625.4	625.8
127.5°	664.2	665.6	667.0	668.4	669.8	670.9	671.7	672.6	673.4	674.2	674.8
130°	694.2	695.6	697.0	698.4	699.8	700.8	701.5	702.2	702.9	703.6	704.3
132.5°	723.0	724.4	725.8	727.2	728.6	729.5	730.1	730.6	731.2	731.8	732.5
135°	766.9	768.0	769.0	770.1	771.1	772.0	772.7	773.4	774.1	774.8	775.3
137.5°	804.5	805.8	807.1	808.4	809.7	810.6	811.0	811.4	811.7	812.1	813.0
140°	829.5	830.5	831.6	832.6	833.7	834.4	835.0	835.5	836.0	836.5	837.2
142.5°	852.6	853.7	854.7	855.8	856.8	857.6	858.1	858.6	859.1	859.7	860.2
145°	885.0	886.2	887.4	888.6	889.9	890.6	891.0	891.3	891.7	892.0	892.4
147.5°	915.5	916.3	917.1	917.9	918.7	919.3	919.6	919.9	920.3	920.6	921.0
150°	934.2	934.8	935.3	935.8	936.3	936.8	937.1	937.5	937.8	938.2	938.5
152.5°	951.1	951.4	951.6	951.9	952.1	952.3	952.5	952.7	953.0	953.2	953.8
155°	974.9	974.6	974.2	973.9	973.5	973.4	973.6	973.8	973.9	974.1	975.0
157.5°	993.3	993.3	993.3	993.2	993.2	993.1	992.9	992.8	992.6	992.4	993.5
160°	1004.6	1004.4	1004.3	1004.1	1003.9	1003.7	1003.6	1003.4	1003.2	1003.0	1004.1
162.5°	1015.2	1014.8	1014.3	1013.9	1013.4	1013.1	1012.9	1012.8	1012.6	1012.4	1013.6
165°	1028.1	1027.5	1027.0	1026.5	1026.0	1025.6	1025.5	1025.3	1025.1	1024.9	1026.3
167.5°	1038.1	1037.4	1036.7	1036.0	1035.3	1034.9	1034.9	1034.9	1034.9	1034.9	1036.3
170°	1043.7	1043.0	1042.3	1041.6	1040.9	1040.6	1040.6	1040.6	1040.6	1040.6	1042.0
172.5°	1047.4	1046.6	1045.8	1044.9	1044.1	1043.8	1043.9	1044.0	1044.2	1044.3	1045.7
175°	1052.3	1051.4	1050.6	1049.7	1048.8	1048.5	1048.6	1048.8	1049.0	1049.2	1050.4
177.5°	1053.5	1052.9	1052.2	1051.5	1050.8	1050.5	1050.6	1050.8	1050.9	1051.0	1052.2
180°	1052.3	1052.3	1052.3	1052.3	1052.3	1052.3	1052.3	1052.3	1052.3	1052.3	1052.3

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	944.5	944.5	944.5	944.5	944.5	944.5	944.5	944.5
2.5°	940.8	942.3	943.8	944.4	944.1	943.8	943.6	943.3
5°	934.5	936.1	937.6	938.2	937.9	937.5	937.2	936.8
7.5°	921.4	922.2	923.1	923.2	922.6	922.1	921.5	920.9
10°	909.6	909.8	909.9	909.6	908.8	907.9	907.1	906.2
12.5°	895.0	894.9	894.8	894.2	893.2	892.2	891.3	890.3
15°	869.3	868.4	867.6	866.5	865.3	864.2	863.0	861.8
17.5°	838.6	836.8	834.9	833.2	831.4	829.6	827.8	826.1
20°	817.5	815.3	813.1	811.0	808.9	806.9	804.8	802.8
22.5°	795.0	792.2	789.5	787.1	785.2	783.3	781.4	779.5
25°	758.1	754.5	751.0	748.2	746.4	744.5	742.6	740.7
27.5°	717.9	713.0	708.0	704.1	701.2	698.4	695.5	692.6
30°	689.3	683.5	677.8	673.5	670.8	668.1	665.3	662.6
32.5°	661.3	654.9	648.6	644.0	641.2	638.3	635.4	632.6
35°	619.6	612.3	605.0	599.8	596.7	593.7	590.6	587.5
37.5°	574.9	566.6	558.3	552.3	548.5	544.7	540.9	537.1
40°	543.8	534.9	526.1	519.7	515.8	511.9	508.0	504.0
42.5°	514.0	504.3	494.6	488.0	484.5	481.0	477.5	474.0
45°	470.1	460.4	450.7	443.8	439.7	435.6	431.5	427.4
47.5°	424.7	414.2	403.6	396.5	392.9	389.2	385.6	381.9
50°	394.1	383.5	373.0	365.7	361.8	357.9	354.0	350.1
52.5°	364.5	353.5	342.5	335.3	331.8	328.3	324.8	321.3
55°	320.4	310.5	300.6	294.0	290.6	287.2	283.8	280.4
57.5°	277.0	267.7	258.4	252.3	249.4	246.5	243.6	240.7
60°	249.7	240.5	231.3	225.3	222.4	219.5	216.6	213.7
62.5°	222.6	214.0	205.3	199.5	196.5	193.4	190.4	187.4
65°	184.0	175.7	167.3	162.2	160.4	158.5	156.6	154.7
67.5°	147.2	140.9	134.7	130.6	128.6	126.6	124.6	122.6
70°	124.4	118.5	112.5	108.6	106.7	104.9	103.0	101.1
72.5°	103.9	99.1	94.2	91.4	90.6	89.8	89.0	88.2
75°	77.8	76.1	74.4	73.4	73.0	72.7	72.3	72.0
77.5°	58.7	57.8	56.8	56.2	55.9	55.5	55.2	54.8
80°	47.2	46.7	46.2	45.8	45.5	45.1	44.8	44.4
82.5°	36.2	35.7	35.2	34.9	34.8	34.8	34.7	34.6
85°	20.8	20.4	20.1	19.9	19.9	19.9	19.9	19.9
87.5°	11.7	11.7	11.7	11.7	11.6	11.6	11.5	11.4
90°	20.2	20.8	21.5	22.1	22.4	22.8	23.1	23.5
92.5°	22.2	23.3	24.5	25.1	25.3	25.5	25.7	26.0
95°	26.7	27.9	29.1	29.7	29.7	29.7	29.7	29.7
97.5°	28.0	29.3	30.7	31.5	31.7	31.9	32.0	32.2
100°	28.6	30.0	31.4	32.1	32.3	32.5	32.7	32.8
102.5°	42.8	38.5	34.2	32.2	32.5	32.8	33.1	33.5
105°	109.7	79.0	48.2	33.0	33.4	33.7	34.1	34.4
107.5°	268.7	246.2	223.6	200.7	177.6	154.4	131.2	108.0
110°	341.1	335.4	329.7	314.4	289.5	264.7	239.8	215.0

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CATALOG NUMBER: S123RDIP-S560D805U835-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	392.2	392.3	392.4	389.8	384.6	379.3	374.1	368.9
115°	452.2	454.0	455.7	456.9	457.6	458.3	459.0	459.7
117.5°	506.6	508.0	509.3	510.1	510.3	510.4	510.5	510.7
120°	542.2	543.6	545.0	545.7	545.7	545.7	545.7	545.7
122.5°	577.0	578.0	579.0	579.5	579.7	579.8	580.0	580.1
125°	626.1	626.5	626.8	627.2	627.5	627.9	628.2	628.6
127.5°	675.3	675.9	676.4	676.5	676.2	675.9	675.5	675.2
130°	705.0	705.7	706.4	706.6	706.2	705.9	705.5	705.2
132.5°	733.1	733.8	734.5	734.6	734.2	733.7	733.2	732.7
135°	775.8	776.3	776.8	776.8	776.3	775.8	775.3	774.8
137.5°	813.8	814.6	815.5	815.7	815.4	815.0	814.7	814.3
140°	837.9	838.6	839.3	839.5	839.1	838.8	838.4	838.1
142.5°	860.8	861.3	861.9	861.9	861.4	860.9	860.5	860.0
145°	892.7	893.1	893.4	893.6	893.6	893.6	893.6	893.6
147.5°	921.3	921.7	922.0	921.8	921.0	920.2	919.4	918.6
150°	938.8	939.2	939.5	939.5	938.9	938.4	937.9	937.4
152.5°	954.4	955.0	955.7	955.6	954.8	954.0	953.2	952.4
155°	975.9	976.7	977.6	977.5	976.5	975.4	974.4	973.3
157.5°	994.5	995.5	996.6	996.4	995.1	993.7	992.4	991.0
160°	1005.1	1006.2	1007.2	1007.1	1005.9	1004.7	1003.5	1002.3
162.5°	1014.8	1016.0	1017.1	1017.2	1016.1	1015.0	1014.0	1012.9
165°	1027.7	1029.1	1030.5	1030.6	1029.4	1028.1	1026.9	1025.7
167.5°	1037.7	1039.1	1040.5	1040.5	1039.1	1037.7	1036.3	1034.9
170°	1043.3	1044.7	1046.1	1046.1	1044.7	1043.3	1042.0	1040.6
172.5°	1047.1	1048.5	1049.9	1049.8	1048.3	1046.8	1045.2	1043.7
175°	1051.6	1052.8	1054.0	1053.9	1052.6	1051.2	1049.8	1048.4
177.5°	1053.3	1054.4	1055.5	1055.4	1054.0	1052.6	1051.2	1049.8
180°	1052.3	1052.3	1052.3	1052.3	1052.3	1052.3	1052.3	1052.3

(END OF REPORT)