

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: P331940-830

Luminaire Tested: **S123DIP-S560D1025U830-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331940-830
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: S123DIP-S560D1025U830-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1025 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6092.5 lumens
Efficiency: N/A
Efficacy: 136.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

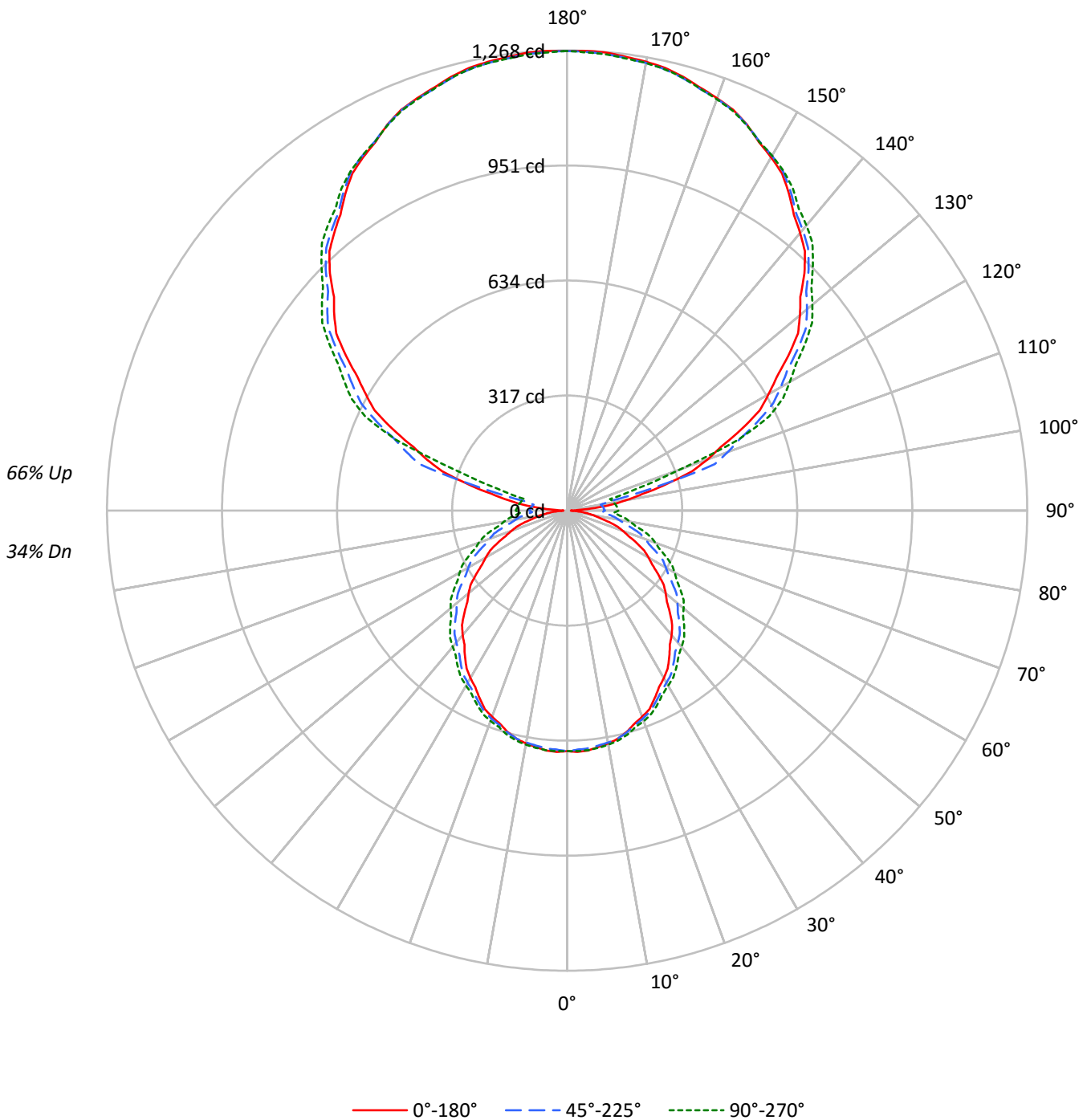
Input Watts (W): 44.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	103	103	103	103	93	93	93	93	74	74	74		57	57	57		41	41	41	34
1	93	89	85	81	84	80	77	74	64	61	59		49	47	46		35	34	33	27
2	85	77	71	66	76	70	64	60	56	52	48		42	40	38		30	29	27	22
3	77	68	60	54	69	61	55	50	49	44	40		37	34	32		27	25	23	18
4	70	60	52	46	63	54	47	42	43	38	34		33	30	27		24	21	20	15
5	64	53	45	39	58	48	41	36	38	33	29		30	26	23		21	19	17	13
6	59	47	39	33	53	43	36	31	34	29	25		27	23	20		19	17	15	12
7	55	42	35	29	49	39	32	27	31	26	22		24	20	18		18	15	13	10
8	51	38	31	25	45	35	28	23	28	23	19		22	18	16		16	14	12	9
9	47	35	28	23	42	32	25	21	26	21	17		20	16	14		15	12	10	8
10	44	32	25	20	39	29	23	19	24	19	15		19	15	12		14	11	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7134	7134	7134
5°	7156	6954	6959
10°	7093	6795	6761
15°	7001	6612	6544
20°	6871	6405	6306
25°	6709	6166	6056
30°	6544	5951	5803
35°	6359	5723	5601
40°	6181	5515	5382
45°	5986	5318	5210
50°	5793	5121	5019
55°	5578	4919	4848
60°	5369	4716	4670
65°	5156	4499	4462
70°	4837	4254	4245
75°	4430	3973	4029
80°	3958	3698	3779
85°	3521	3508	3633



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.8	1.0
10°-20°	179.1	2.9
20°-30°	267.9	4.4
30°-40°	319.9	5.3
40°-50°	334.7	5.5
50°-60°	314.1	5.2
60°-70°	262.3	4.3
70°-80°	187.7	3.1
80°-90°	115.5	1.9
90°-100°	116.3	1.9
100°-110°	271.0	4.4
110°-120°	561.5	9.2
120°-130°	690.8	11.3
130°-140°	725.9	11.9
140°-150°	672.5	11.0
150°-160°	540.9	8.9
160°-170°	349.1	5.7
170°-180°	120.3	2.0
0°-30°	509.8	8.4
0°-40°	829.7	13.6
0°-60°	1478.6	24.3
0°-90°	2044.1	33.6
90°-120°	948.8	15.6
90°-150°	3038.1	49.9
90°-180°	4048.0	66.4
0°-180°	6092.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	663	663	663	663	663	
5°	664	662	658	663	663	63
15°	632	634	633	640	640	178
25°	570	577	580	589	589	263
35°	491	502	512	522	526	307
45°	401	419	437	450	456	310
55°	306	330	356	375	381	274
65°	212	240	272	292	300	209
75°	115	149	185	208	217	123
85°	35	72	110	133	142	37
90°	10	55	104	131	142	9
95°	65	58	101	128	137	77
105°	286	309	260	122	122	303
115°	530	545	578	604	614	523
125°	744	752	776	792	800	664
135°	924	930	941	956	958	711
145°	1066	1071	1074	1081	1084	667
155°	1173	1171	1172	1176	1171	540
165°	1237	1234	1233	1240	1234	349
175°	1266	1262	1262	1268	1262	120
180°	1266	1266	1266	1266	1266	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	662.8	662.8	662.8	662.8	662.8	662.8	662.8	662.8	662.8	662.8	662.8
2.5°	665.7	665.3	665.0	664.5	664.1	663.5	662.4	661.4	660.3	659.3	660.3
5°	663.5	663.2	662.9	662.6	662.2	661.6	660.6	659.7	658.7	657.7	659.0
7.5°	657.0	657.0	657.1	657.2	657.3	656.9	655.9	655.0	654.0	653.1	654.7
10°	651.3	651.6	651.9	652.2	652.5	652.3	651.5	650.7	649.9	649.1	650.7
12.5°	644.3	644.8	645.3	645.6	646.1	646.1	645.5	645.0	644.4	643.9	645.4
15°	631.8	632.3	632.7	633.2	633.7	633.9	633.7	633.5	633.4	633.2	634.8
17.5°	615.9	616.8	617.8	618.8	619.7	620.2	620.1	620.0	620.0	619.9	621.3
20°	604.4	605.3	606.2	607.2	608.1	608.8	609.2	609.4	609.7	610.1	611.5
22.5°	592.2	593.1	594.1	595.1	596.1	596.7	597.2	597.7	598.1	598.5	600.4
25°	570.4	572.0	573.6	575.2	576.8	577.9	578.3	578.8	579.3	579.8	581.8
27.5°	548.5	550.3	552.1	553.9	555.7	557.1	558.2	559.2	560.2	561.3	563.1
30°	532.8	534.9	537.0	539.1	541.2	542.9	544.1	545.4	546.7	548.0	550.0
32.5°	515.5	517.8	520.2	522.5	524.9	526.9	528.6	530.2	531.9	533.6	535.6
35°	491.0	493.5	496.1	498.7	501.2	503.6	505.7	507.7	509.8	511.9	514.3
37.5°	465.0	467.9	470.7	473.6	476.5	479.3	481.8	484.4	486.9	489.6	492.3
40°	447.6	450.5	453.5	456.3	459.2	462.2	465.4	468.6	471.8	475.0	477.8
42.5°	428.6	432.2	435.6	439.1	442.7	446.1	449.5	452.8	456.2	459.5	462.5
45°	401.4	405.3	409.2	413.0	416.8	420.8	424.8	428.8	432.8	436.8	439.9
47.5°	373.0	377.4	381.7	386.1	390.4	394.9	399.5	404.1	408.7	413.3	416.7
50°	354.5	359.0	363.4	368.0	372.5	377.2	382.2	387.2	392.1	397.1	400.8
52.5°	334.9	339.6	344.4	349.1	353.8	359.0	364.5	369.9	375.4	381.0	384.7
55°	306.1	311.4	316.7	322.0	327.3	332.8	338.7	344.4	350.2	355.9	360.2
57.5°	278.1	283.6	289.2	294.6	300.2	306.1	312.5	318.8	325.1	331.4	335.7
60°	258.4	264.3	270.0	275.8	281.5	287.8	294.4	301.0	307.5	314.1	318.6
62.5°	240.0	245.9	251.8	257.7	263.6	270.0	277.0	284.0	291.0	297.9	302.4
65°	211.5	217.8	224.0	230.4	236.6	243.3	250.3	257.3	264.4	271.5	276.3
67.5°	182.7	189.4	196.0	202.6	209.2	216.1	223.4	230.5	237.7	244.9	250.2
70°	162.5	169.4	176.3	183.1	190.0	197.4	205.0	212.7	220.5	228.2	233.3
72.5°	143.9	150.9	157.8	164.7	171.5	179.0	186.9	194.9	202.8	210.8	216.1
75°	114.8	122.3	129.9	137.4	145.0	152.8	160.8	168.8	176.8	184.8	190.1
77.5°	89.4	97.0	104.6	112.2	119.8	127.6	135.7	143.8	151.9	160.0	165.6
80°	71.4	79.4	87.2	95.1	102.9	111.0	119.3	127.7	136.1	144.4	149.9
82.5°	55.9	63.9	71.8	79.8	87.8	96.0	104.5	113.0	121.5	130.0	135.4
85°	35.3	43.4	51.5	59.5	67.5	75.7	84.3	92.7	101.2	109.7	115.2
87.5°	19.4	27.8	36.2	44.6	53.1	61.5	70.3	79.1	87.8	96.5	102.1
90°	10.4	20.3	30.3	40.2	50.1	60.6	71.4	82.4	93.3	104.2	110.5
92.5°	26.3	32.8	39.3	45.8	52.3	60.6	70.8	80.9	91.0	101.0	107.7
95°	65.3	63.1	60.7	58.3	56.1	60.0	70.1	80.3	90.5	100.7	107.1
97.5°	122.4	124.2	126.0	127.8	129.6	126.8	119.2	111.7	104.2	96.6	103.0
100°	165.5	174.8	184.1	193.4	202.7	194.8	169.6	144.3	119.1	93.9	100.2
102.5°	214.6	222.3	229.9	237.5	245.2	234.8	206.4	178.0	149.6	121.2	120.6
105°	286.2	292.3	298.4	304.6	310.8	307.8	296.0	284.0	272.1	260.1	227.7
107.5°	360.9	366.0	371.2	376.3	381.4	388.7	398.2	407.7	417.3	426.7	403.9
110°	410.8	415.3	419.9	424.4	429.0	435.6	444.3	453.1	461.8	470.5	467.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	458.9	462.8	466.7	470.5	474.5	480.6	489.1	497.6	506.0	514.4	518.6
115°	529.5	532.7	535.8	539.0	542.2	547.6	555.3	563.0	570.6	578.2	584.2
117.5°	598.4	601.2	603.9	606.6	609.4	613.9	620.3	626.7	633.1	639.4	645.0
120°	640.7	643.5	646.1	648.8	651.5	655.8	661.7	667.6	673.5	679.5	684.9
122.5°	684.4	686.4	688.3	690.3	692.3	696.2	702.0	707.8	713.7	719.4	724.2
125°	743.5	745.2	746.9	748.6	750.2	753.8	759.3	764.8	770.2	775.7	779.5
127.5°	801.4	803.0	804.5	806.0	807.5	810.7	815.6	820.4	825.3	830.1	834.0
130°	837.6	839.1	840.7	842.2	843.7	846.4	850.5	854.5	858.6	862.6	866.5
132.5°	871.7	873.3	875.0	876.6	878.2	880.6	883.9	887.1	890.3	893.6	897.3
135°	924.4	925.5	926.5	927.7	928.8	930.6	933.2	935.8	938.4	941.0	944.5
137.5°	969.4	970.8	972.3	973.7	975.2	976.7	978.2	979.6	981.0	982.5	986.0
140°	998.9	1000.1	1001.5	1002.7	1003.9	1005.1	1006.3	1007.3	1008.4	1009.6	1012.8
142.5°	1026.7	1027.8	1029.0	1030.1	1031.2	1032.2	1032.9	1033.6	1034.3	1035.1	1037.9
145°	1065.7	1067.1	1068.3	1069.6	1070.9	1071.8	1072.2	1072.6	1073.0	1073.5	1075.2
147.5°	1101.6	1102.7	1103.6	1104.6	1105.5	1106.2	1106.6	1107.0	1107.5	1107.9	1108.7
150°	1124.3	1124.9	1125.5	1126.1	1126.7	1127.3	1127.7	1128.1	1128.5	1129.0	1129.4
152.5°	1144.5	1144.9	1145.2	1145.5	1145.8	1146.0	1146.2	1146.5	1146.8	1147.0	1147.7
155°	1173.2	1172.7	1172.3	1172.0	1171.5	1171.4	1171.6	1171.8	1172.1	1172.2	1173.3
157.5°	1195.3	1195.3	1195.3	1195.2	1195.2	1195.0	1194.9	1194.7	1194.5	1194.2	1195.5
160°	1208.9	1208.7	1208.5	1208.3	1208.1	1207.9	1207.7	1207.5	1207.2	1207.0	1208.3
162.5°	1221.7	1221.2	1220.6	1220.1	1219.6	1219.2	1219.0	1218.7	1218.5	1218.3	1219.7
165°	1237.2	1236.5	1235.9	1235.3	1234.6	1234.3	1234.0	1233.8	1233.6	1233.4	1235.0
167.5°	1249.2	1248.4	1247.5	1246.7	1245.9	1245.4	1245.4	1245.4	1245.4	1245.4	1247.1
170°	1255.9	1255.1	1254.3	1253.5	1252.6	1252.2	1252.2	1252.2	1252.2	1252.2	1253.9
172.5°	1260.5	1259.5	1258.5	1257.4	1256.5	1256.0	1256.2	1256.4	1256.5	1256.7	1258.4
175°	1266.3	1265.3	1264.2	1263.2	1262.2	1261.7	1261.9	1262.2	1262.3	1262.5	1264.0
177.5°	1267.8	1267.0	1266.1	1265.3	1264.5	1264.1	1264.3	1264.5	1264.6	1264.8	1266.1
180°	1266.3	1266.3	1266.3	1266.3	1266.3	1266.3	1266.3	1266.3	1266.3	1266.3	1266.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	662.8	662.8	662.8	662.8	662.8	662.8	662.8	662.8
2.5°	661.4	662.4	663.5	663.9	663.7	663.6	663.5	663.4
5°	660.3	661.6	662.9	663.5	663.3	663.1	663.0	662.8
7.5°	656.3	657.9	659.6	660.3	660.1	659.9	659.7	659.5
10°	652.3	653.9	655.5	656.1	655.8	655.5	655.2	654.9
12.5°	646.9	648.3	649.8	650.4	650.1	649.7	649.4	649.1
15°	636.4	638.0	639.6	640.4	640.2	640.0	639.9	639.7
17.5°	622.8	624.2	625.7	626.3	626.0	625.8	625.7	625.4
20°	613.0	614.4	615.9	616.7	616.8	617.0	617.2	617.3
22.5°	602.2	604.1	605.9	606.7	606.6	606.5	606.4	606.3
25°	583.9	586.1	588.1	589.2	589.2	589.2	589.2	589.2
27.5°	564.9	566.7	568.4	569.5	569.6	569.7	569.9	570.0
30°	551.9	553.7	555.7	556.7	556.7	556.7	556.7	556.7
32.5°	537.6	539.7	541.8	543.0	543.4	543.8	544.1	544.5
35°	516.7	519.2	521.5	523.0	523.7	524.3	525.0	525.7
37.5°	494.9	497.7	500.4	502.1	502.6	503.0	503.6	504.1
40°	480.5	483.2	486.0	487.7	488.3	489.0	489.6	490.2
42.5°	465.4	468.4	471.5	473.3	474.3	475.1	476.1	476.9
45°	442.9	445.9	449.0	451.2	452.4	453.7	455.1	456.3
47.5°	420.2	423.6	427.0	429.2	430.2	431.2	432.3	433.2
50°	404.4	408.2	411.9	414.2	415.4	416.5	417.6	418.8
52.5°	388.6	392.4	396.2	398.8	400.2	401.5	402.9	404.4
55°	364.6	368.9	373.2	376.1	377.4	378.6	379.9	381.3
57.5°	340.2	344.5	348.8	351.8	353.3	354.8	356.3	357.8
60°	323.1	327.5	332.1	335.2	337.0	338.7	340.4	342.2
62.5°	306.9	311.4	315.8	319.0	320.6	322.2	323.9	325.5
65°	281.1	285.9	290.8	294.0	295.6	297.2	298.8	300.4
67.5°	255.4	260.7	266.0	269.3	270.6	271.9	273.3	274.7
70°	238.5	243.6	248.7	252.0	253.6	255.2	256.8	258.4
72.5°	221.3	226.6	231.9	235.4	237.0	238.6	240.2	241.8
75°	195.4	200.8	206.0	209.6	211.5	213.5	215.4	217.4
77.5°	171.2	176.7	182.3	185.9	187.4	188.8	190.3	191.8
80°	155.3	160.8	166.3	169.8	171.4	173.0	174.6	176.2
82.5°	140.9	146.3	151.7	155.3	156.9	158.5	160.1	161.7
85°	120.6	126.1	131.6	135.1	136.7	138.3	139.9	141.5
87.5°	107.7	113.4	118.9	122.6	124.3	126.0	127.7	129.4
90°	116.8	123.0	129.3	133.5	135.5	137.5	139.6	141.6
92.5°	114.4	121.0	127.7	131.9	133.7	135.3	137.0	138.8
95°	113.5	120.0	126.4	130.4	132.1	133.7	135.3	136.9
97.5°	109.5	115.9	122.4	126.5	128.4	130.2	132.0	133.7
100°	106.5	112.8	119.1	123.2	125.1	126.9	128.7	130.4
102.5°	119.9	119.2	118.6	119.2	121.2	123.2	125.2	127.1
105°	195.2	162.7	130.2	114.8	116.7	118.6	120.4	122.2
107.5°	381.1	358.3	335.4	310.8	284.3	257.8	231.3	204.8
110°	465.1	462.3	459.6	443.9	415.3	386.7	358.1	329.5



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CATALOG NUMBER: S123DIP-S560D1025U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	522.8	527.0	531.1	530.7	525.8	520.9	516.0	511.1
115°	590.1	596.1	602.0	606.1	608.2	610.3	612.5	614.5
117.5°	650.4	655.9	661.4	664.9	666.3	667.7	669.1	670.5
120°	690.2	695.6	701.0	704.2	705.3	706.4	707.6	708.7
122.5°	729.0	733.7	738.4	741.4	742.7	744.0	745.3	746.6
125°	783.3	787.1	790.9	793.5	795.1	796.6	798.1	799.7
127.5°	837.8	841.7	845.5	847.7	848.5	849.1	849.8	850.5
130°	870.3	874.2	878.2	880.3	880.9	881.5	882.0	882.5
132.5°	901.1	904.8	908.6	910.8	911.3	911.7	912.3	912.8
135°	948.0	951.5	955.1	956.9	957.1	957.2	957.4	957.6
137.5°	989.6	993.2	996.6	998.6	999.0	999.4	999.8	1000.1
140°	1016.1	1019.3	1022.5	1024.4	1024.7	1025.1	1025.5	1025.9
142.5°	1040.8	1043.5	1046.3	1047.8	1048.1	1048.3	1048.5	1048.8
145°	1076.9	1078.6	1080.2	1081.5	1082.0	1082.7	1083.4	1084.0
147.5°	1109.5	1110.3	1111.1	1111.3	1110.9	1110.5	1110.1	1109.7
150°	1129.8	1130.2	1130.7	1130.7	1130.4	1130.1	1129.7	1129.4
152.5°	1148.5	1149.2	1150.0	1150.0	1149.1	1148.2	1147.3	1146.3
155°	1174.3	1175.4	1176.4	1176.3	1175.1	1173.8	1172.5	1171.3
157.5°	1196.7	1198.0	1199.3	1199.1	1197.4	1195.8	1194.2	1192.6
160°	1209.6	1210.8	1212.0	1211.9	1210.5	1209.0	1207.6	1206.1
162.5°	1221.2	1222.6	1224.0	1224.1	1222.8	1221.4	1220.2	1218.9
165°	1236.7	1238.4	1240.1	1240.2	1238.7	1237.3	1235.8	1234.4
167.5°	1248.8	1250.5	1252.1	1252.1	1250.5	1248.8	1247.1	1245.4
170°	1255.6	1257.3	1258.9	1258.9	1257.3	1255.6	1253.9	1252.2
172.5°	1260.1	1261.7	1263.4	1263.3	1261.5	1259.6	1257.8	1255.9
175°	1265.5	1267.0	1268.4	1268.3	1266.6	1265.0	1263.3	1261.6
177.5°	1267.4	1268.9	1270.2	1270.0	1268.3	1266.7	1265.0	1263.3
180°	1266.3	1266.3	1266.3	1266.3	1266.3	1266.3	1266.3	1266.3

(END OF REPORT)