

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: P331931-840

Luminaire Tested: **S123DIP-S560D805U840-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331931-840
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-S560D805U840-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 805 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5630.0 lumens
Efficiency: N/A
Efficacy: 146.6 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

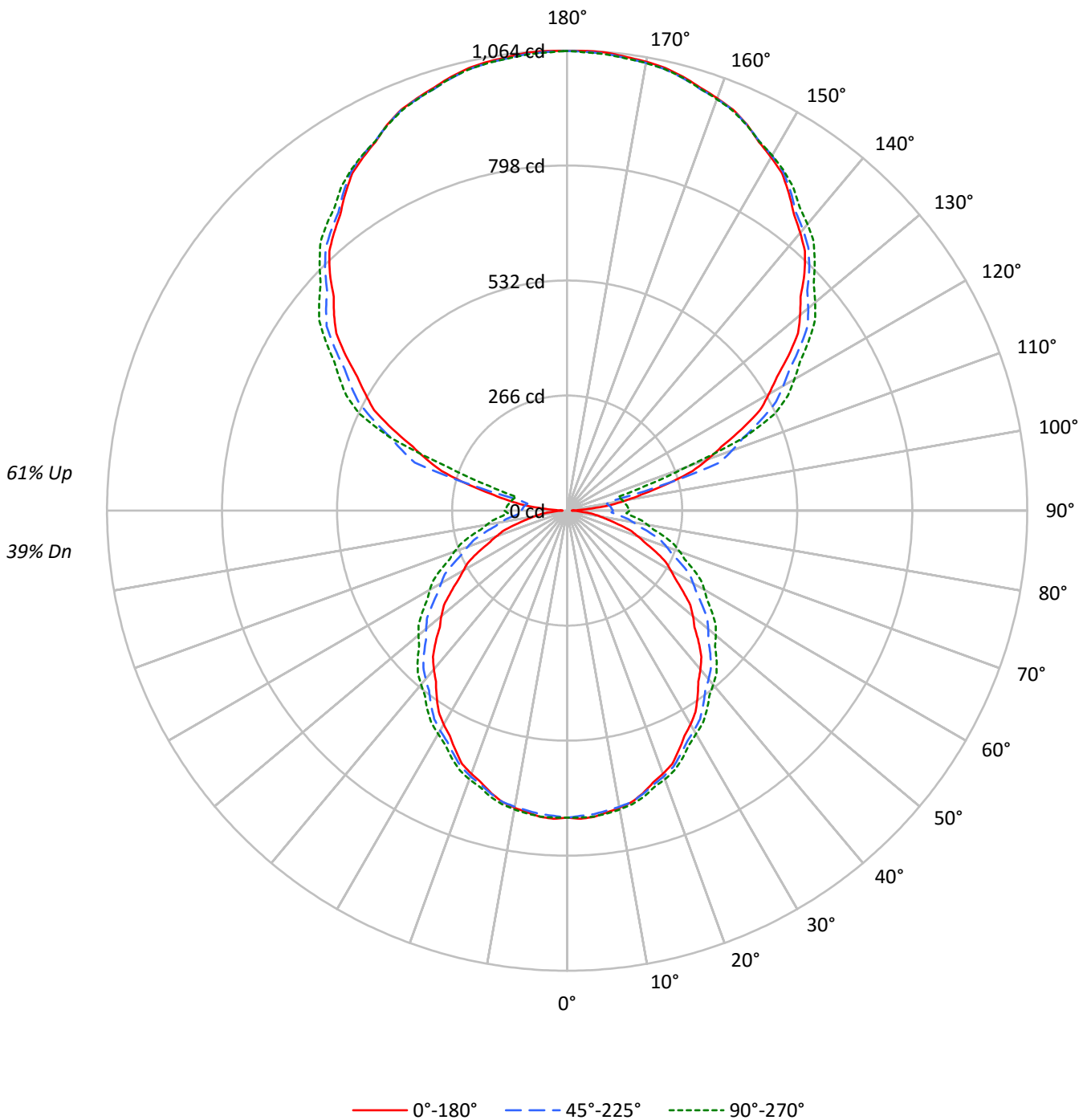
Input Watts (W): 38.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	95	95	95	95	77	77	77	61	61	61	46	46	46	39
1	94	90	86	82	86	82	78	75	66	64	62	52	51	49	39	38	37	31
2	86	78	72	66	77	71	65	61	58	54	50	45	43	40	34	32	31	25
3	78	68	61	55	70	62	56	50	51	46	42	40	36	34	30	28	26	21
4	71	60	52	46	64	55	48	42	45	39	35	35	32	29	27	24	22	18
5	65	53	45	39	59	49	42	36	40	34	30	32	28	25	24	21	19	15
6	60	48	40	34	54	44	36	31	36	30	26	28	24	21	22	19	17	13
7	55	43	35	29	50	39	32	27	32	27	23	26	22	19	20	17	15	12
8	51	39	31	26	46	36	29	24	29	24	20	24	20	17	18	15	13	11
9	48	35	28	23	43	32	26	21	27	22	18	22	18	15	17	14	12	9
10	44	32	25	20	40	30	23	19	25	20	16	20	16	13	15	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7643	7643	7643
5°	7667	7451	7455
10°	7599	7280	7244
15°	7501	7084	7012
20°	7361	6862	6756
25°	7189	6606	6489
30°	7011	6375	6216
35°	6812	6132	6000
40°	6623	5910	5767
45°	6414	5697	5582
50°	6206	5488	5378
55°	5978	5271	5194
60°	5753	5053	5005
65°	5525	4819	4780
70°	5183	4558	4549
75°	4746	4256	4316
80°	4241	3962	4047
85°	3780	3757	3892



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.3	1.2
10°-20°	191.9	3.4
20°-30°	287.0	5.1
30°-40°	342.8	6.1
40°-50°	358.6	6.4
50°-60°	336.5	6.0
60°-70°	281.1	5.0
70°-80°	201.1	3.6
80°-90°	122.9	2.2
90°-100°	113.9	2.0
100°-110°	239.4	4.3
110°-120°	479.2	8.5
120°-130°	584.3	10.4
130°-140°	611.3	10.9
140°-150°	564.8	10.0
150°-160°	453.9	8.1
160°-170°	293.0	5.2
170°-180°	101.0	1.8
0°-30°	546.3	9.7
0°-40°	889.0	15.8
0°-60°	1584.2	28.1
0°-90°	2189.3	38.9
90°-120°	832.5	14.8
90°-150°	2592.9	46.1
90°-180°	3441.0	61.1
0°-180°	5630.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	710	710	710	710	710	
5°	711	709	705	710	710	67
15°	677	679	678	686	685	191
25°	611	619	621	631	631	282
35°	526	538	548	560	563	329
45°	430	449	468	482	489	332
55°	328	354	381	401	408	294
65°	227	257	291	313	322	224
75°	123	160	198	223	233	131
85°	38	77	118	143	152	40
90°	11	57	106	135	145	9
95°	57	57	101	129	138	66
105°	242	265	231	120	121	256
115°	445	460	494	520	530	440
125°	624	632	656	674	681	558
135°	776	780	792	807	810	597
145°	894	899	901	908	912	560
155°	984	983	984	987	983	453
165°	1038	1036	1035	1041	1036	293
175°	1063	1059	1060	1064	1059	101
180°	1063	1063	1063	1063	1063	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	710.1	710.1	710.1	710.1	710.1	710.1	710.1	710.1	710.1	710.1	710.1
2.5°	713.3	712.9	712.5	712.0	711.6	710.8	709.7	708.6	707.5	706.4	707.5
5°	710.9	710.5	710.2	709.9	709.5	708.8	707.8	706.8	705.8	704.7	706.1
7.5°	704.0	704.0	704.1	704.2	704.3	703.8	702.8	701.8	700.7	699.7	701.5
10°	697.8	698.1	698.4	698.8	699.1	698.9	698.0	697.2	696.3	695.5	697.2
12.5°	690.3	690.8	691.4	691.8	692.3	692.3	691.7	691.1	690.4	689.8	691.5
15°	676.9	677.4	677.9	678.4	678.9	679.1	678.9	678.7	678.6	678.4	680.1
17.5°	659.8	660.9	662.0	663.0	664.0	664.5	664.4	664.3	664.3	664.2	665.7
20°	647.5	648.5	649.5	650.6	651.6	652.3	652.7	653.0	653.3	653.7	655.2
22.5°	634.5	635.5	636.5	637.6	638.6	639.3	639.9	640.4	640.9	641.3	643.3
25°	611.2	612.9	614.6	616.3	618.0	619.1	619.7	620.2	620.7	621.2	623.4
27.5°	587.6	589.6	591.6	593.5	595.4	596.9	598.0	599.2	600.3	601.4	603.3
30°	570.9	573.1	575.3	577.6	579.9	581.7	583.0	584.4	585.7	587.1	589.3
32.5°	552.3	554.8	557.3	559.9	562.4	564.5	566.3	568.0	569.9	571.7	573.9
35°	526.0	528.8	531.5	534.3	537.0	539.6	541.8	544.0	546.2	548.5	551.1
37.5°	498.2	501.3	504.3	507.5	510.6	513.5	516.2	519.0	521.7	524.5	527.5
40°	479.6	482.7	485.8	488.9	492.0	495.2	498.7	502.1	505.5	509.0	511.9
42.5°	459.2	463.0	466.8	470.5	474.3	478.0	481.6	485.1	488.8	492.3	495.5
45°	430.1	434.2	438.4	442.5	446.6	450.8	455.1	459.4	463.7	468.0	471.3
47.5°	399.6	404.3	409.0	413.6	418.3	423.1	428.1	432.9	437.9	442.8	446.5
50°	379.8	384.7	389.4	394.3	399.1	404.1	409.5	414.9	420.1	425.5	429.4
52.5°	358.8	363.9	369.0	374.1	379.1	384.7	390.5	396.4	402.2	408.2	412.2
55°	328.0	333.7	339.3	345.0	350.7	356.6	362.8	369.0	375.2	381.3	386.0
57.5°	298.0	303.9	309.8	315.7	321.6	328.0	334.8	341.5	348.3	355.1	359.7
60°	276.9	283.2	289.3	295.5	301.6	308.3	315.4	322.4	329.4	336.5	341.3
62.5°	257.1	263.5	269.8	276.1	282.5	289.3	296.8	304.3	311.7	319.2	324.0
65°	226.6	233.4	240.0	246.8	253.5	260.6	268.2	275.7	283.3	290.8	296.0
67.5°	195.7	202.9	210.0	217.0	224.2	231.6	239.3	247.0	254.7	262.4	268.0
70°	174.1	181.5	188.8	196.2	203.6	211.5	219.6	227.9	236.2	244.5	249.9
72.5°	154.2	161.7	169.1	176.4	183.8	191.8	200.3	208.8	217.3	225.9	231.6
75°	123.0	131.1	139.2	147.2	155.3	163.7	172.3	180.9	189.5	198.0	203.7
77.5°	95.7	103.9	112.1	120.2	128.4	136.7	145.4	154.1	162.8	171.5	177.4
80°	76.5	85.0	93.4	101.9	110.3	119.0	127.8	136.8	145.8	154.7	160.6
82.5°	59.9	68.5	77.0	85.5	94.1	102.9	112.0	121.1	130.2	139.3	145.1
85°	37.9	46.5	55.1	63.7	72.3	81.1	90.3	99.4	108.5	117.5	123.4
87.5°	20.7	29.7	38.6	47.5	56.4	65.4	74.6	83.9	93.1	102.3	108.4
90°	10.8	21.0	31.2	41.4	51.6	62.2	73.2	84.2	95.3	106.3	112.9
92.5°	24.1	31.2	38.4	45.4	52.5	61.3	71.6	82.0	92.3	102.7	109.5
95°	56.7	56.1	55.6	55.2	54.7	59.7	70.0	80.4	90.7	101.1	107.7
97.5°	104.4	107.2	110.0	112.8	115.6	114.8	110.2	105.6	101.0	96.4	103.0
100°	140.4	149.4	158.4	167.4	176.4	171.2	151.8	132.3	112.8	93.3	99.8
102.5°	181.5	188.9	196.4	203.9	211.4	204.0	181.9	159.8	137.6	115.5	116.0
105°	241.5	247.5	253.6	259.6	265.7	264.5	256.1	247.7	239.3	231.0	204.7
107.5°	304.0	309.0	314.1	319.1	324.2	331.5	341.0	350.5	360.0	369.5	351.3
110°	345.7	350.2	354.7	359.2	363.7	370.3	379.2	388.0	396.8	405.6	404.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	386.2	389.9	393.7	397.6	401.3	407.5	416.1	424.5	433.1	441.6	446.1
115°	445.2	448.3	451.4	454.5	457.7	463.1	470.9	478.7	486.5	494.1	500.1
117.5°	503.0	505.5	508.2	510.7	513.3	517.9	524.5	531.1	537.8	544.3	549.9
120°	538.4	540.8	543.3	545.7	548.2	552.5	558.7	564.8	571.1	577.2	582.6
122.5°	575.0	576.7	578.6	580.3	582.0	585.9	592.0	598.0	604.1	610.2	614.9
125°	624.5	625.8	627.2	628.6	630.1	633.6	639.3	645.0	650.7	656.3	660.4
127.5°	673.1	674.3	675.5	676.8	678.0	681.2	686.1	691.1	696.0	700.9	705.0
130°	703.4	704.7	705.9	707.1	708.3	711.0	715.2	719.3	723.5	727.6	731.5
132.5°	731.8	733.2	734.6	736.0	737.3	739.6	743.0	746.3	749.6	752.9	756.7
135°	776.1	776.9	777.8	778.7	779.6	781.3	783.9	786.5	789.1	791.7	795.3
137.5°	813.7	815.0	816.2	817.4	818.6	819.9	821.3	822.8	824.3	825.7	829.3
140°	838.4	839.5	840.5	841.6	842.6	843.7	844.8	845.8	846.9	847.9	851.1
142.5°	861.8	862.7	863.6	864.5	865.5	866.3	866.9	867.5	868.2	868.8	871.6
145°	894.5	895.5	896.6	897.7	898.7	899.4	899.8	900.1	900.5	900.8	902.5
147.5°	924.5	925.3	926.1	927.0	927.8	928.4	928.7	929.0	929.4	929.7	930.5
150°	943.4	944.0	944.5	945.0	945.5	946.0	946.3	946.7	947.1	947.5	947.8
152.5°	960.5	960.8	961.0	961.3	961.5	961.7	961.9	962.1	962.4	962.6	963.2
155°	984.5	984.2	983.8	983.5	983.1	983.0	983.2	983.4	983.5	983.7	984.6
157.5°	1003.1	1003.1	1003.1	1003.0	1003.0	1002.9	1002.7	1002.6	1002.4	1002.2	1003.3
160°	1014.5	1014.3	1014.2	1014.0	1013.8	1013.6	1013.5	1013.3	1013.1	1012.9	1014.0
162.5°	1025.2	1024.8	1024.3	1023.9	1023.4	1023.1	1022.9	1022.8	1022.6	1022.4	1023.6
165°	1038.2	1037.6	1037.1	1036.6	1036.1	1035.7	1035.6	1035.4	1035.2	1035.0	1036.4
167.5°	1048.3	1047.6	1046.9	1046.2	1045.5	1045.1	1045.1	1045.1	1045.1	1045.1	1046.5
170°	1054.0	1053.3	1052.6	1051.9	1051.2	1050.9	1050.9	1050.9	1050.9	1050.9	1052.3
172.5°	1057.7	1056.9	1056.1	1055.2	1054.4	1054.1	1054.2	1054.3	1054.5	1054.6	1056.0
175°	1062.7	1061.8	1061.0	1060.1	1059.1	1058.8	1058.9	1059.1	1059.3	1059.6	1060.8
177.5°	1063.9	1063.3	1062.6	1061.9	1061.2	1060.9	1061.0	1061.2	1061.3	1061.4	1062.6
180°	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	710.1	710.1	710.1	710.1	710.1	710.1	710.1	710.1
2.5°	708.6	709.7	710.8	711.3	711.1	711.0	710.9	710.7
5°	707.5	708.8	710.2	710.8	710.6	710.4	710.3	710.1
7.5°	703.2	704.9	706.7	707.4	707.2	707.0	706.8	706.6
10°	698.9	700.6	702.4	703.0	702.7	702.4	702.0	701.7
12.5°	693.1	694.6	696.2	696.8	696.5	696.1	695.8	695.5
15°	681.9	683.6	685.3	686.1	685.9	685.7	685.6	685.4
17.5°	667.3	668.8	670.3	671.1	670.8	670.6	670.3	670.0
20°	656.8	658.3	659.8	660.8	660.9	661.1	661.3	661.4
22.5°	645.2	647.2	649.1	650.1	649.9	649.8	649.7	649.6
25°	625.6	627.9	630.2	631.3	631.3	631.3	631.3	631.3
27.5°	605.2	607.1	609.0	610.2	610.3	610.4	610.6	610.7
30°	591.3	593.3	595.4	596.4	596.4	596.4	596.4	596.4
32.5°	576.0	578.2	580.5	581.8	582.2	582.6	583.0	583.4
35°	553.6	556.2	558.8	560.4	561.1	561.8	562.5	563.2
37.5°	530.3	533.2	536.1	538.0	538.5	539.0	539.6	540.1
40°	514.8	517.8	520.7	522.5	523.2	523.9	524.5	525.2
42.5°	498.7	501.9	505.1	507.2	508.2	509.1	510.1	511.0
45°	474.5	477.8	481.1	483.4	484.7	486.1	487.6	488.9
47.5°	450.2	453.8	457.5	459.9	460.9	462.0	463.1	464.1
50°	433.3	437.4	441.3	443.8	445.0	446.3	447.5	448.7
52.5°	416.4	420.4	424.5	427.3	428.8	430.2	431.7	433.2
55°	390.6	395.3	399.9	402.9	404.3	405.7	407.1	408.5
57.5°	364.5	369.1	373.8	376.9	378.5	380.1	381.7	383.3
60°	346.2	350.9	355.8	359.1	361.0	362.8	364.8	366.7
62.5°	328.8	333.7	338.4	341.7	343.5	345.2	347.0	348.7
65°	301.1	306.3	311.5	315.0	316.7	318.4	320.1	321.8
67.5°	273.7	279.3	285.0	288.5	289.9	291.3	292.9	294.3
70°	255.5	260.9	266.5	270.0	271.8	273.5	275.2	276.9
72.5°	237.1	242.8	248.4	252.2	253.9	255.6	257.3	259.0
75°	209.3	215.1	220.8	224.6	226.6	228.7	230.8	232.9
77.5°	183.4	189.3	195.3	199.1	200.8	202.3	203.9	205.5
80°	166.4	172.3	178.1	181.9	183.6	185.3	187.0	188.7
82.5°	151.0	156.7	162.6	166.4	168.1	169.9	171.6	173.3
85°	129.3	135.1	141.0	144.7	146.4	148.1	149.9	151.6
87.5°	114.3	120.3	126.3	130.2	132.0	133.7	135.5	137.3
90°	119.5	126.0	132.6	136.8	139.0	141.0	143.1	145.1
92.5°	116.3	123.2	130.0	134.3	136.1	137.8	139.7	141.5
95°	114.2	120.8	127.2	131.4	133.1	134.8	136.5	138.4
97.5°	109.5	116.0	122.5	126.7	128.7	130.6	132.4	134.3
100°	106.1	112.5	118.9	123.0	124.9	126.8	128.8	130.7
102.5°	116.5	117.0	117.5	118.8	120.8	122.9	124.9	126.9
105°	178.4	152.2	125.9	113.8	115.7	117.5	119.5	121.4
107.5°	333.2	315.0	296.8	276.8	254.9	233.1	211.2	189.2
110°	402.9	401.6	400.3	387.8	364.1	340.3	316.6	293.0



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CATALOG NUMBER: S123DIP-S560D805U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	450.5	454.9	459.4	459.7	456.0	452.1	448.4	444.5
115°	505.9	511.8	517.7	521.7	523.7	525.8	528.0	530.0
117.5°	555.3	560.8	566.3	569.8	571.3	572.8	574.2	575.7
120°	587.9	593.3	598.6	602.0	603.2	604.4	605.6	606.7
122.5°	619.8	624.6	629.3	632.4	633.8	635.1	636.4	637.8
125°	664.3	668.2	672.2	675.0	676.5	678.0	679.6	681.2
127.5°	708.9	712.9	716.8	719.2	720.0	720.8	721.6	722.6
130°	735.5	739.5	743.5	745.8	746.5	747.1	747.8	748.5
132.5°	760.5	764.4	768.2	770.5	771.1	771.8	772.5	773.2
135°	798.9	802.5	806.2	808.1	808.5	808.8	809.1	809.5
137.5°	832.8	836.4	839.9	842.0	842.5	843.0	843.5	844.0
140°	854.4	857.7	861.0	862.9	863.4	863.9	864.4	864.9
142.5°	874.4	877.4	880.2	881.8	882.2	882.6	882.9	883.3
145°	904.2	906.1	907.8	909.0	909.6	910.3	911.0	911.7
147.5°	931.3	932.0	932.8	933.1	932.9	932.7	932.5	932.3
150°	948.1	948.5	948.8	948.9	948.7	948.6	948.4	948.2
152.5°	963.8	964.4	965.1	965.0	964.3	963.6	962.8	962.1
155°	985.5	986.3	987.2	987.1	986.1	985.0	984.0	982.9
157.5°	1004.3	1005.3	1006.4	1006.2	1004.9	1003.5	1002.2	1000.8
160°	1015.0	1016.1	1017.1	1017.0	1015.8	1014.6	1013.4	1012.2
162.5°	1024.8	1026.0	1027.1	1027.2	1026.1	1025.0	1024.0	1022.9
165°	1037.8	1039.3	1040.7	1040.8	1039.6	1038.2	1037.0	1035.8
167.5°	1047.9	1049.4	1050.8	1050.8	1049.4	1047.9	1046.5	1045.1
170°	1053.6	1055.0	1056.4	1056.4	1055.0	1053.6	1052.3	1050.9
172.5°	1057.4	1058.8	1060.3	1060.2	1058.6	1057.1	1055.5	1054.0
175°	1062.0	1063.2	1064.4	1064.3	1063.0	1061.6	1060.2	1058.7
177.5°	1063.7	1064.8	1065.9	1065.8	1064.4	1063.0	1061.6	1060.2
180°	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7

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