

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: P332049-927

Luminaire Tested: **S123DIP-S1165D365U927-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332049-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S1165D365U927-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4829.9 lumens
Efficiency: N/A
Efficacy: 97.0 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-Direct

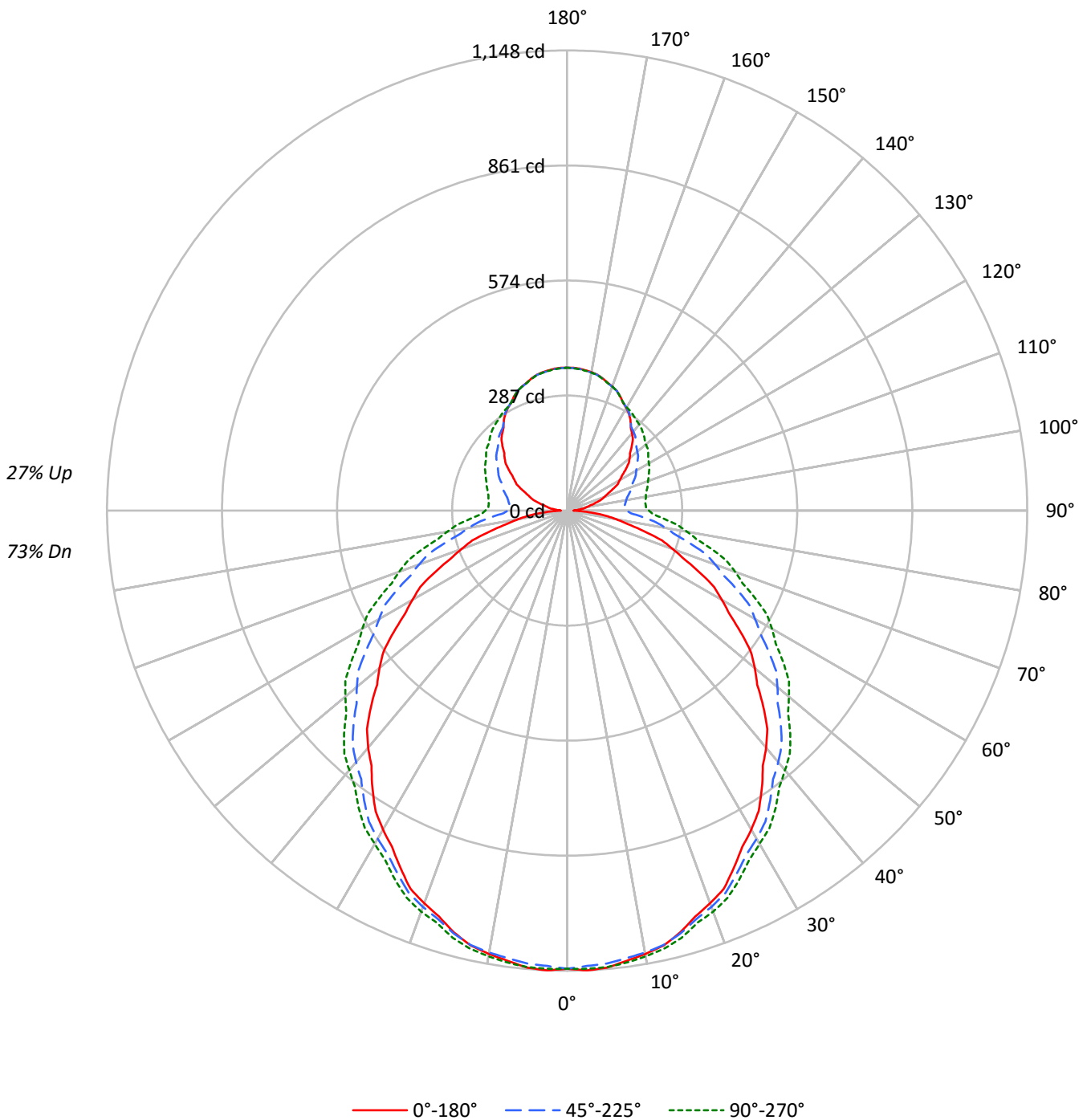
Input Watts (W): 49.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	113	113	113	113	107	107	107	107	96	96	96	86	86	86	77	77	77	73
1	101	96	92	87	96	91	87	83	82	79	76	74	71	69	66	64	62	58
2	92	83	76	70	87	79	73	67	71	66	62	64	60	56	57	54	51	48
3	83	73	64	58	79	69	62	56	62	56	51	56	51	47	50	46	43	40
4	76	64	55	49	72	61	53	47	55	49	43	50	44	40	44	40	37	34
5	70	57	48	42	66	54	46	40	49	42	37	44	39	34	40	35	32	29
6	64	51	42	36	61	49	41	35	44	38	32	40	34	30	36	31	28	25
7	60	46	38	32	56	44	36	31	40	33	29	36	31	27	33	28	25	22
8	55	42	34	28	52	40	33	27	37	30	25	33	28	24	30	26	22	20
9	52	38	30	25	49	37	29	24	34	27	23	31	25	21	28	23	20	18
10	48	35	28	23	46	34	27	22	31	25	21	28	23	19	26	21	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12304	12304	12304
5°	12343	11994	12001
10°	12232	11718	11659
15°	12075	11405	11287
20°	11849	11047	10876
25°	11571	10634	10444
30°	11287	10264	10006
35°	10967	9871	9658
40°	10663	9514	9284
45°	10325	9172	8985
50°	9990	8832	8655
55°	9622	8486	8359
60°	9263	8134	8056
65°	8896	7758	7694
70°	8341	7336	7323
75°	7640	6853	6946
80°	6835	6380	6515
85°	6085	6053	6268



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.4	2.2
10°-20°	308.9	6.4
20°-30°	462.0	9.6
30°-40°	551.8	11.4
40°-50°	577.3	12.0
50°-60°	541.7	11.2
60°-70°	452.5	9.4
70°-80°	323.7	6.7
80°-90°	194.1	4.0
90°-100°	144.3	3.0
100°-110°	158.5	3.3
110°-120°	177.6	3.7
120°-130°	189.4	3.9
130°-140°	190.0	3.9
140°-150°	175.0	3.6
150°-160°	144.6	3.0
160°-170°	96.3	2.0
170°-180°	33.7	0.7
0°-30°	879.3	18.2
0°-40°	1431.1	29.6
0°-60°	2550.1	52.8
0°-90°	3520.4	72.9
90°-120°	480.5	9.9
90°-150°	1034.9	21.4
90°-180°	1309.0	27.1
0°-180°	4829.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1143	1143	1143	1143	1143	
5°	1144	1142	1134	1144	1143	108
15°	1090	1093	1092	1104	1103	307
25°	984	996	1000	1015	1016	453
35°	847	866	883	901	906	529
45°	692	722	753	776	787	534
55°	528	569	614	646	658	473
65°	365	414	468	504	518	360
75°	198	257	319	358	375	212
85°	61	124	189	230	244	64
90°	16	80	147	189	204	12
95°	30	81	144	182	196	29
105°	73	105	160	193	206	78
115°	125	143	185	214	225	124
125°	178	181	214	238	247	159
135°	228	230	242	263	269	176
145°	275	275	275	285	289	172
155°	314	314	314	315	313	144
165°	342	341	341	342	341	96
175°	356	354	354	356	354	34
180°	356	356	356	356	356	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1
2.5°	1148.1	1147.5	1146.8	1146.1	1145.4	1144.2	1142.5	1140.7	1138.9	1137.2	1138.9
5°	1144.4	1143.8	1143.3	1142.7	1142.2	1141.1	1139.4	1137.7	1136.1	1134.4	1136.6
7.5°	1133.1	1133.3	1133.4	1133.5	1133.6	1132.9	1131.2	1129.7	1128.1	1126.4	1129.2
10°	1123.2	1123.8	1124.3	1124.9	1125.5	1125.0	1123.6	1122.2	1120.9	1119.4	1122.2
12.5°	1111.3	1112.0	1112.8	1113.6	1114.4	1114.3	1113.3	1112.4	1111.4	1110.5	1113.0
15°	1089.6	1090.4	1091.2	1092.1	1092.9	1093.2	1092.9	1092.7	1092.3	1092.1	1094.9
17.5°	1062.2	1063.8	1065.5	1067.1	1068.8	1069.6	1069.5	1069.4	1069.3	1069.1	1071.7
20°	1042.3	1043.9	1045.6	1047.3	1048.9	1050.0	1050.6	1051.1	1051.7	1052.3	1054.7
22.5°	1021.4	1023.0	1024.7	1026.4	1028.0	1029.2	1030.0	1030.8	1031.5	1032.3	1035.5
25°	983.7	986.5	989.3	992.0	994.8	996.6	997.4	998.2	999.1	999.9	1003.5
27.5°	945.9	949.0	952.2	955.4	958.5	961.0	962.7	964.5	966.3	968.0	971.1
30°	919.0	922.6	926.1	929.8	933.3	936.3	938.5	940.7	942.9	945.2	948.5
32.5°	889.1	893.1	897.1	901.2	905.2	908.7	911.6	914.5	917.3	920.2	923.8
35°	846.8	851.2	855.6	860.1	864.5	868.5	872.1	875.7	879.2	882.9	887.0
37.5°	801.9	806.9	811.9	816.9	821.9	826.6	831.0	835.4	839.9	844.3	849.0
40°	772.1	777.1	782.0	787.0	791.9	797.3	802.8	808.3	813.8	819.4	824.1
42.5°	739.2	745.3	751.4	757.4	763.5	769.4	775.2	780.9	786.7	792.5	797.6
45°	692.4	699.0	705.6	712.3	718.9	725.7	732.6	739.5	746.5	753.4	758.6
47.5°	643.3	650.8	658.3	665.9	673.4	681.1	689.0	697.0	704.9	712.8	718.7
50°	611.4	619.2	626.9	634.6	642.4	650.5	659.2	667.7	676.3	684.8	691.3
52.5°	577.6	585.7	593.9	602.1	610.3	619.2	628.6	638.0	647.5	657.0	663.6
55°	528.0	537.1	546.2	555.4	564.5	574.0	584.0	594.0	604.0	613.9	621.4
57.5°	479.7	489.2	498.7	508.2	517.8	528.0	538.8	549.8	560.6	571.6	579.1
60°	445.8	455.7	465.7	475.7	485.6	496.3	507.6	519.0	530.4	541.7	549.5
62.5°	413.9	424.1	434.3	444.5	454.6	465.7	477.8	489.7	501.8	513.8	521.5
65°	364.9	375.7	386.4	397.2	408.1	419.5	431.7	443.9	456.1	468.2	476.5
67.5°	315.1	326.5	337.9	349.4	360.8	372.8	385.2	397.6	410.0	422.4	431.4
70°	280.2	292.1	304.0	315.8	327.8	340.4	353.6	366.9	380.2	393.5	402.3
72.5°	248.3	260.2	272.1	284.0	295.9	308.7	322.4	336.1	349.9	363.6	372.7
75°	198.0	211.0	224.0	237.0	250.0	263.4	277.3	291.1	304.9	318.8	327.9
77.5°	154.2	167.3	180.4	193.5	206.6	220.1	234.1	248.0	262.0	275.9	285.6
80°	123.3	136.8	150.4	164.0	177.5	191.5	205.9	220.3	234.6	249.1	258.5
82.5°	96.4	110.2	124.0	137.8	151.5	165.7	180.3	195.0	209.5	224.1	233.5
85°	61.0	74.9	88.7	102.5	116.4	130.6	145.3	159.9	174.6	189.3	198.7
87.5°	33.2	47.1	61.0	74.9	88.8	102.9	117.2	131.4	145.7	160.0	169.4
90°	16.5	30.7	44.8	59.0	73.2	87.8	102.7	117.6	132.5	147.4	157.1
92.5°	21.9	34.6	47.3	60.0	72.6	86.1	100.4	114.8	129.1	143.5	152.9
95°	30.2	41.4	52.7	63.9	75.1	87.8	101.8	115.9	129.9	144.0	152.8
97.5°	41.5	51.6	61.6	71.8	81.8	93.5	106.8	120.1	133.4	146.7	155.3
100°	49.3	58.5	67.7	77.0	86.2	97.4	110.4	123.4	136.4	149.5	157.7
102.5°	58.4	66.5	74.8	82.9	91.1	101.7	114.6	127.5	140.5	153.4	161.4
105°	73.0	79.7	86.5	93.2	100.1	109.6	122.1	134.5	147.0	159.5	167.2
107.5°	88.7	94.4	100.1	105.8	111.6	120.2	131.7	143.2	154.7	166.3	173.9
110°	98.5	103.5	108.7	113.8	118.9	127.0	138.2	149.4	160.6	171.8	179.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	109.6	113.8	118.0	122.2	126.4	133.7	144.4	155.0	165.7	176.3	183.6
115°	125.2	128.7	132.2	135.7	139.3	145.9	155.7	165.6	175.4	185.3	191.9
117.5°	141.9	144.0	146.2	148.4	150.5	156.2	165.4	174.6	183.8	193.0	199.6
120°	151.4	153.1	154.9	156.7	158.4	163.7	172.5	181.3	190.2	199.0	205.3
122.5°	162.4	163.3	164.4	165.3	166.4	171.1	179.7	188.1	196.7	205.2	211.2
125°	177.8	178.1	178.2	178.4	178.6	182.7	190.5	198.4	206.4	214.3	219.8
127.5°	193.3	193.5	193.5	193.7	193.8	197.1	203.6	210.1	216.7	223.2	228.2
130°	203.6	203.8	204.1	204.3	204.5	207.3	212.6	218.0	223.3	228.7	233.7
132.5°	212.9	213.3	213.8	214.3	214.7	217.1	221.3	225.6	230.0	234.2	239.0
135°	228.4	228.5	228.6	228.7	228.8	230.4	233.3	236.3	239.3	242.2	247.0
137.5°	242.7	242.8	242.9	243.0	243.0	244.1	246.0	247.8	249.7	251.6	255.7
140°	251.8	252.1	252.4	252.7	253.0	253.7	254.5	255.4	256.4	257.2	261.3
142.5°	260.9	261.1	261.2	261.3	261.3	261.5	261.8	262.1	262.4	262.6	266.3
145°	275.3	275.1	275.0	274.9	274.7	274.7	274.9	275.1	275.3	275.4	277.7
147.5°	286.6	286.8	287.1	287.3	287.5	287.7	287.9	288.0	288.2	288.4	289.1
150°	295.3	295.5	295.6	295.7	295.9	296.0	296.1	296.2	296.4	296.4	296.4
152.5°	302.5	302.7	302.9	303.0	303.2	303.3	303.4	303.5	303.6	303.6	303.7
155°	313.9	313.9	313.9	313.9	313.9	313.9	313.9	313.9	314.0	314.1	314.3
157.5°	323.4	323.4	323.3	323.2	323.1	323.1	323.2	323.2	323.3	323.4	323.6
160°	329.5	329.4	329.2	329.2	329.0	328.9	328.9	328.9	328.9	328.9	329.2
162.5°	334.9	334.7	334.5	334.4	334.1	334.1	334.1	334.2	334.3	334.3	334.6
165°	341.8	341.7	341.4	341.3	341.0	341.0	341.0	341.0	341.0	341.0	341.4
167.5°	347.4	347.1	346.9	346.6	346.3	346.3	346.3	346.3	346.4	346.5	346.8
170°	350.5	350.2	350.0	349.7	349.5	349.4	349.4	349.4	349.4	349.4	349.8
172.5°	353.0	352.7	352.4	352.2	352.0	351.8	351.8	351.8	351.8	351.8	352.2
175°	355.5	355.3	355.1	354.8	354.6	354.4	354.4	354.4	354.4	354.4	354.8
177.5°	356.6	356.4	356.2	356.0	355.8	355.7	355.7	355.7	355.7	355.7	356.0
180°	356.4	356.4	356.4	356.4	356.4	356.4	356.4	356.4	356.4	356.4	356.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1
2.5°	1140.7	1142.5	1144.2	1145.0	1144.8	1144.5	1144.3	1144.1
5°	1138.8	1141.1	1143.3	1144.2	1144.0	1143.7	1143.4	1143.1
7.5°	1131.9	1134.7	1137.5	1138.8	1138.4	1138.0	1137.7	1137.4
10°	1125.0	1127.8	1130.5	1131.6	1131.1	1130.5	1130.0	1129.4
12.5°	1115.6	1118.2	1120.7	1121.7	1121.1	1120.5	1120.0	1119.4
15°	1097.6	1100.3	1103.1	1104.4	1104.1	1103.8	1103.6	1103.3
17.5°	1074.1	1076.7	1079.1	1080.1	1079.8	1079.4	1079.0	1078.6
20°	1057.2	1059.7	1062.2	1063.6	1063.8	1064.1	1064.4	1064.7
22.5°	1038.6	1041.8	1044.9	1046.4	1046.2	1046.1	1045.9	1045.8
25°	1007.1	1010.7	1014.3	1016.1	1016.1	1016.1	1016.1	1016.1
27.5°	974.2	977.3	980.4	982.1	982.3	982.5	982.8	983.0
30°	951.8	955.1	958.4	960.0	960.0	960.0	960.0	960.0
32.5°	927.3	930.9	934.4	936.5	937.2	937.9	938.5	939.1
35°	891.2	895.3	899.4	902.1	903.2	904.4	905.5	906.5
37.5°	853.7	858.4	863.1	865.9	866.8	867.7	868.5	869.4
40°	828.8	833.5	838.2	841.1	842.2	843.3	844.4	845.5
42.5°	802.8	807.9	813.1	816.4	817.9	819.5	821.0	822.6
45°	763.9	769.1	774.4	778.2	780.4	782.6	784.8	787.0
47.5°	724.6	730.6	736.5	740.3	742.0	743.7	745.4	747.1
50°	697.6	704.0	710.3	714.5	716.4	718.4	720.3	722.2
52.5°	670.2	676.8	683.3	687.9	690.2	692.6	695.0	697.4
55°	628.8	636.3	643.8	648.6	650.9	653.1	655.3	657.5
57.5°	586.6	594.1	601.7	606.7	609.3	612.0	614.6	617.1
60°	557.1	564.9	572.7	578.1	581.1	584.2	587.2	590.3
62.5°	529.3	537.0	544.8	550.1	552.9	555.7	558.6	561.3
65°	484.8	493.1	501.5	506.9	509.7	512.5	515.2	518.0
67.5°	440.5	449.6	458.7	464.4	466.8	469.1	471.3	473.7
70°	411.2	420.1	428.9	434.7	437.5	440.3	443.0	445.8
72.5°	381.8	390.9	399.9	405.8	408.6	411.4	414.2	416.9
75°	337.1	346.2	355.3	361.6	364.9	368.2	371.5	374.8
77.5°	295.2	304.8	314.5	320.5	323.1	325.7	328.2	330.7
80°	267.8	277.3	286.7	292.8	295.6	298.3	301.1	303.8
82.5°	243.0	252.4	261.7	267.8	270.6	273.4	276.2	278.9
85°	208.1	217.5	226.9	233.0	235.8	238.5	241.3	244.1
87.5°	178.9	188.4	197.8	203.9	206.8	209.5	212.3	215.1
90°	166.8	176.4	186.1	192.3	195.2	198.1	201.0	203.9
92.5°	162.2	171.7	181.0	187.0	189.4	191.9	194.4	196.9
95°	161.7	170.5	179.3	185.1	187.9	190.6	193.4	196.1
97.5°	163.8	172.3	180.9	186.5	189.3	191.9	194.7	197.5
100°	165.9	174.1	182.4	187.9	190.8	193.7	196.5	199.5
102.5°	169.4	177.4	185.3	190.7	193.5	196.1	198.9	201.7
105°	175.0	182.7	190.4	195.7	198.3	200.9	203.5	206.1
107.5°	181.5	189.1	196.7	201.7	204.1	206.4	208.8	211.1
110°	186.7	194.2	201.6	206.4	208.4	210.5	212.6	214.7



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CATALOG NUMBER: S123DIP-S1165D365U927-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	190.9	198.1	205.4	210.2	212.7	215.1	217.5	219.9
115°	198.7	205.3	212.1	216.5	218.6	220.8	222.9	225.1
117.5°	206.1	212.7	219.3	223.6	225.5	227.5	229.5	231.5
120°	211.6	217.9	224.2	228.2	230.0	231.9	233.7	235.5
122.5°	217.1	223.2	229.1	233.0	234.8	236.5	238.3	240.0
125°	225.4	230.9	236.5	240.1	241.9	243.5	245.2	246.8
127.5°	233.4	238.5	243.7	247.0	248.6	250.3	251.8	253.4
130°	238.7	243.7	248.7	251.8	253.0	254.3	255.5	256.7
132.5°	243.7	248.4	253.2	256.4	257.9	259.4	260.9	262.5
135°	251.8	256.4	261.2	264.2	265.5	266.7	268.0	269.3
137.5°	259.8	263.9	268.0	270.6	271.8	272.9	274.1	275.2
140°	265.4	269.5	273.5	276.1	277.0	278.0	278.9	279.9
142.5°	269.9	273.5	277.2	279.6	280.6	281.7	282.7	283.8
145°	279.8	281.9	284.1	285.6	286.5	287.3	288.1	289.0
147.5°	289.7	290.4	291.0	291.7	292.3	292.9	293.6	294.2
150°	296.4	296.4	296.4	296.6	296.8	296.9	297.1	297.3
152.5°	303.8	304.0	304.0	304.0	303.8	303.6	303.3	303.1
155°	314.6	314.8	315.1	315.0	314.6	314.1	313.7	313.2
157.5°	323.8	324.2	324.4	324.3	324.0	323.7	323.3	323.0
160°	329.5	329.9	330.2	330.2	329.9	329.7	329.5	329.2
162.5°	334.9	335.3	335.6	335.5	335.1	334.7	334.3	333.9
165°	341.7	342.1	342.5	342.5	342.0	341.6	341.1	340.7
167.5°	347.2	347.6	348.0	348.0	347.6	347.2	346.8	346.5
170°	350.2	350.7	351.1	351.1	350.7	350.2	349.8	349.4
172.5°	352.6	353.0	353.4	353.4	352.9	352.5	352.0	351.6
175°	355.1	355.5	355.9	355.8	355.5	355.0	354.6	354.1
177.5°	356.3	356.6	356.9	356.9	356.6	356.2	355.8	355.5
180°	356.4	356.4	356.4	356.4	356.4	356.4	356.4	356.4

(END OF REPORT)