

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: P333264-930

Luminaire Tested: **S125DIP-S1090D590U930-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333264-930  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-19,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S125DIP-S1090D590U930-4F0-1E-UDD-D4  
Description: DEFINE 5 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1090 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 590 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5208.3 lumens  
Efficiency: N/A  
Efficacy: 106.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.34  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.08')  
CIE Type: Semi-Direct

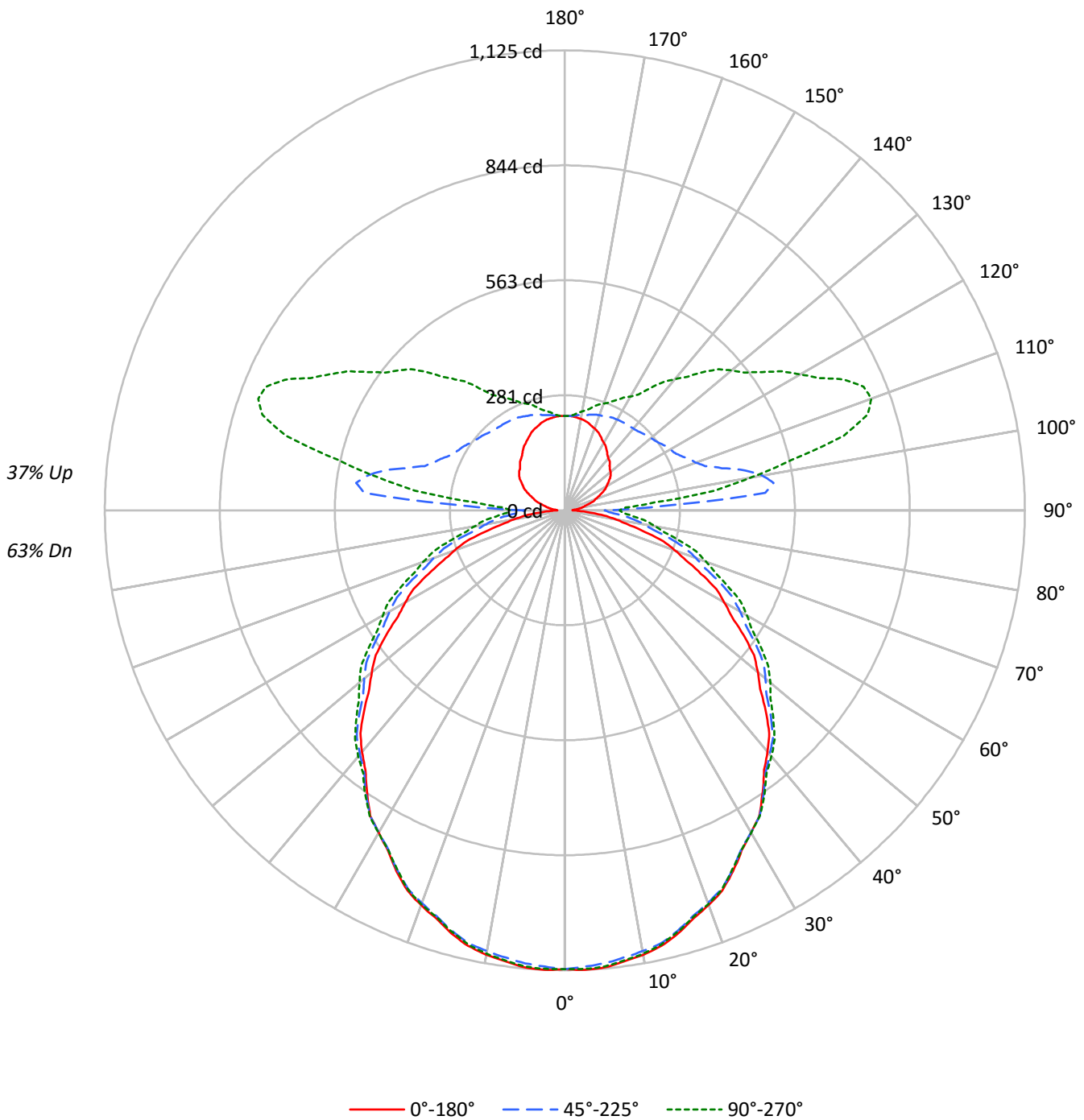
Input Watts (W): 48.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20				20				20	
RC	80									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	110	110	110	110	103	103	103	103	90	90	90	79	79	79	68	68	68	63	
1	100	95	91	87	93	89	85	82	78	75	72	68	66	64	58	57	55	51	
2	90	82	76	70	84	77	71	66	68	63	59	59	56	52	51	48	46	42	
3	82	72	64	58	77	68	61	55	60	54	49	52	48	44	45	42	39	35	
4	75	64	55	49	70	60	52	47	53	47	42	46	41	37	40	36	33	30	
5	69	57	48	42	64	53	46	40	47	41	36	41	36	32	36	32	29	26	
6	64	51	42	36	59	48	40	35	42	36	31	37	32	28	32	28	25	22	
7	59	46	38	32	55	43	36	30	38	32	28	34	29	25	30	26	22	20	
8	55	42	34	28	51	39	32	27	35	29	25	31	26	22	27	23	20	18	
9	51	38	30	25	48	36	29	24	32	26	22	29	24	20	25	21	18	16	
10	48	35	28	23	45	33	26	22	30	24	20	26	22	18	23	19	16	14	

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

	0°	45°	90°
0°	7251	7251	7251
5°	7265	7116	7139
10°	7213	6989	6979
15°	7128	6837	6775
20°	7012	6650	6572
25°	6874	6448	6320
30°	6707	6226	6092
35°	6552	6023	5884
40°	6393	5809	5674
45°	6214	5626	5487
50°	6043	5427	5322
55°	5837	5239	5128
60°	5611	5024	4931
65°	5377	4800	4709
70°	5112	4494	4480
75°	4688	4200	4198
80°	4134	3842	3893
85°	3621	3600	3798



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	106.2	2.0
10°-20°	301.3	5.8
20°-30°	448.2	8.6
30°-40°	530.9	10.2
40°-50°	548.9	10.5
50°-60°	505.6	9.7
60°-70°	408.7	7.8
70°-80°	273.7	5.3
80°-90°	143.2	2.7
90°-100°	246.8	4.7
100°-110°	418.2	8.0
110°-120°	376.7	7.2
120°-130°	295.7	5.7
130°-140°	229.2	4.4
140°-150°	167.5	3.2
150°-160°	116.5	2.2
160°-170°	68.7	1.3
170°-180°	22.3	0.4
0°-30°	855.7	16.4
0°-40°	1386.5	26.6
0°-60°	2441.0	46.9
0°-90°	3266.6	62.7
90°-120°	1041.7	20.0
90°-150°	1734.1	33.3
90°-180°	1942.0	37.3
0°-180°	5208.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1123	1123	1123	1123	1123	
5°	1123	1120	1113	1121	1120	106
15°	1072	1073	1065	1071	1068	302
25°	974	977	971	975	970	448
35°	843	850	848	851	851	527
45°	694	706	712	719	721	536
55°	534	551	569	581	586	477
65°	368	393	419	435	440	365
75°	202	232	266	287	294	215
85°	60	97	135	159	168	64
90°	18	57	98	124	134	13
95°	30	89	492	291	222	28
105°	62	102	398	746	706	66
115°	100	129	314	645	756	99
125°	135	157	285	506	589	119
135°	155	185	266	412	478	120
145°	179	204	259	328	364	112
155°	203	218	252	285	297	93
165°	221	227	242	256	260	62
175°	230	230	232	235	234	22
180°	231	231	231	231	231	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1122.7	1122.7	1122.7	1122.7	1122.7	1122.7	1122.7	1122.7	1122.7	1122.7	1122.7
2.5°	1125.3	1124.9	1124.5	1124.1	1123.7	1122.8	1121.4	1120.1	1118.8	1117.4	1118.8
5°	1122.7	1122.2	1121.7	1121.2	1120.7	1119.6	1117.9	1116.1	1114.4	1112.7	1114.7
7.5°	1112.7	1112.6	1112.3	1112.1	1112.0	1111.0	1109.2	1107.4	1105.7	1103.9	1105.6
10°	1103.9	1103.9	1103.9	1103.9	1103.9	1102.9	1101.0	1099.0	1097.1	1095.1	1096.8
12.5°	1091.6	1091.8	1092.0	1092.2	1092.4	1091.7	1090.1	1088.6	1087.0	1085.4	1086.8
15°	1072.0	1072.3	1072.5	1072.8	1073.0	1072.3	1070.6	1068.9	1067.1	1065.4	1066.9
17.5°	1046.4	1046.9	1047.4	1047.9	1048.4	1047.8	1046.1	1044.4	1042.7	1041.0	1042.1
20°	1028.0	1028.5	1029.0	1029.5	1030.0	1029.3	1027.6	1025.9	1024.2	1022.5	1023.2
22.5°	1006.8	1007.7	1008.6	1009.5	1010.4	1009.8	1008.0	1006.1	1004.1	1002.2	1003.1
25°	974.0	974.8	975.5	976.2	977.0	976.6	975.2	973.7	972.2	970.8	971.8
27.5°	937.5	938.6	939.6	940.8	941.8	941.5	939.9	938.2	936.5	934.9	935.6
30°	910.2	911.7	913.1	914.6	916.1	916.1	914.6	913.1	911.7	910.2	910.7
32.5°	885.6	886.8	888.1	889.4	890.6	890.7	889.7	888.6	887.5	886.5	887.0
35°	843.1	844.8	846.5	848.2	849.9	850.4	849.7	849.0	848.2	847.5	848.2
37.5°	800.6	802.2	803.7	805.3	806.8	807.6	807.3	807.1	806.8	806.6	807.6
40°	771.5	773.5	775.4	777.4	779.3	780.2	780.0	779.8	779.5	779.3	780.2
42.5°	739.8	742.4	744.9	747.5	750.0	751.5	752.1	752.6	753.2	753.7	754.9
45°	694.5	697.2	699.9	702.5	705.2	707.2	708.4	709.6	710.9	712.1	713.8
47.5°	648.1	650.5	653.1	655.5	658.0	660.3	662.4	664.6	666.7	668.7	671.2
50°	616.4	619.1	621.7	624.4	627.1	629.8	632.5	635.2	637.9	640.6	643.3
52.5°	582.9	586.2	589.5	592.7	596.0	599.2	602.6	605.8	609.1	612.4	615.3
55°	533.8	537.7	541.6	545.5	549.4	553.3	557.3	561.2	565.1	569.0	571.7
57.5°	483.6	488.3	493.0	497.7	502.4	507.0	511.5	516.0	520.5	525.0	528.1
60°	450.1	455.0	459.9	464.8	469.7	474.6	479.5	484.4	489.3	494.2	497.8
62.5°	417.6	422.5	427.4	432.3	437.2	442.2	447.5	452.8	458.1	463.3	467.4
65°	367.6	373.2	378.9	384.5	390.1	395.8	401.7	407.6	413.4	419.3	423.0
67.5°	320.5	326.0	331.3	336.8	342.2	347.9	353.9	359.9	365.8	371.8	376.3
70°	286.2	291.8	297.4	303.0	308.7	314.6	321.0	327.3	333.7	340.1	344.7
72.5°	252.7	258.5	264.3	270.2	276.0	282.3	289.3	296.3	303.2	310.1	315.2
75°	202.5	208.9	215.2	221.6	228.0	235.1	242.9	250.7	258.5	266.4	271.3
77.5°	154.3	161.7	169.0	176.3	183.7	191.1	198.6	206.2	213.7	221.2	226.6
80°	124.3	131.7	139.0	146.3	153.7	161.5	169.8	178.1	186.5	194.8	200.2
82.5°	97.1	104.8	112.5	120.3	128.0	136.1	144.6	153.1	161.7	170.2	175.4
85°	60.5	68.6	76.6	84.7	92.8	101.1	109.7	118.2	126.8	135.3	140.7
87.5°	34.4	42.3	50.4	58.4	66.4	74.7	83.1	91.6	100.0	108.4	114.2
90°	18.1	26.3	35.1	43.9	52.7	61.6	70.4	79.7	88.5	97.7	103.8
92.5°	21.5	30.0	41.1	54.1	69.4	90.8	124.7	175.9	230.6	236.7	213.5
95°	29.7	36.4	46.6	58.0	74.6	102.9	160.9	271.6	408.3	492.4	488.9
97.5°	38.5	44.8	53.1	63.9	78.8	100.8	141.8	224.7	367.0	514.9	590.2
100°	44.7	50.7	57.7	68.0	81.9	102.4	137.2	205.5	330.5	490.4	611.8
102.5°	51.6	56.9	63.1	73.4	86.2	106.0	137.6	196.0	302.6	451.5	592.5
105°	62.5	66.4	72.6	81.2	92.5	111.2	139.0	187.7	272.7	397.7	536.1
107.5°	73.1	77.3	82.8	90.0	101.0	118.0	144.8	187.3	257.6	359.8	479.8
110°	80.7	84.5	89.4	96.5	106.4	123.4	149.3	188.3	251.4	341.0	447.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	89.3	92.5	96.4	102.9	112.3	128.5	153.4	190.3	248.0	328.6	421.8
115°	100.5	103.2	106.3	112.2	120.9	136.6	160.1	193.5	244.4	313.6	392.9
117.5°	110.6	113.2	115.8	121.1	130.1	144.9	167.2	197.8	242.6	303.5	373.3
120°	118.1	120.2	122.8	127.7	136.3	151.2	173.0	201.0	242.4	297.8	362.0
122.5°	125.0	126.4	128.2	132.7	141.7	156.2	177.9	204.6	241.7	292.4	351.6
125°	134.6	135.3	137.4	141.3	149.9	164.4	184.6	209.5	241.3	284.8	337.1
127.5°	141.2	142.4	145.1	150.2	159.3	173.3	192.1	214.5	242.1	278.7	323.3
130°	146.1	147.2	150.7	156.5	166.0	179.7	197.5	218.7	243.0	275.2	315.0
132.5°	149.0	150.7	155.1	161.8	171.9	185.2	202.4	221.5	243.6	271.7	307.0
135°	154.7	156.4	161.7	168.9	178.4	191.7	207.8	224.9	243.8	266.4	296.1
137.5°	162.2	163.4	168.4	175.6	185.0	198.3	212.2	227.7	244.9	263.0	287.1
140°	165.8	167.1	172.7	180.2	189.0	201.7	215.4	229.6	244.8	260.8	282.1
142.5°	171.0	171.8	176.8	184.0	192.3	204.1	216.9	230.1	244.3	259.4	278.1
145°	178.8	179.4	183.8	190.1	198.3	208.8	220.9	232.5	245.1	258.6	273.8
147.5°	185.8	186.4	190.4	196.4	203.7	213.1	223.7	234.2	245.6	257.4	270.0
150°	190.7	191.6	194.9	200.9	207.4	215.3	225.6	235.3	245.6	256.2	267.4
152.5°	195.9	196.4	199.3	204.6	210.8	217.9	227.4	236.0	245.2	254.8	264.8
155°	202.8	202.8	205.5	210.2	214.8	221.4	229.3	236.7	244.2	252.1	260.4
157.5°	208.9	208.8	211.1	215.1	219.2	224.0	230.9	237.2	243.0	249.2	256.3
160°	213.0	212.5	214.4	217.7	221.4	225.6	231.6	237.2	241.8	247.4	253.0
162.5°	216.4	215.9	217.8	220.6	223.6	227.1	232.4	236.8	240.8	245.2	250.1
165°	221.4	220.5	221.8	224.1	226.0	228.9	232.5	236.3	239.0	241.8	245.6
167.5°	224.7	224.3	225.1	226.4	227.7	229.4	232.5	235.1	236.4	238.6	241.2
170°	227.0	226.5	227.0	227.9	228.9	230.2	232.5	234.4	235.3	236.7	238.6
172.5°	228.4	227.6	228.0	229.0	229.6	230.2	232.2	233.7	233.8	234.5	235.9
175°	230.2	229.3	229.8	230.2	230.2	230.2	231.6	232.5	232.0	232.0	232.5
177.5°	231.1	230.3	230.3	230.6	230.3	230.3	231.1	231.4	230.6	230.6	231.1
180°	230.6	230.6	230.6	230.6	230.6	230.6	230.6	230.6	230.6	230.6	230.6



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1122.7	1122.7	1122.7	1122.7	1122.7	1122.7	1122.7	1122.7
2.5°	1120.1	1121.4	1122.8	1123.4	1123.2	1123.0	1122.8	1122.7
5°	1116.6	1118.6	1120.5	1121.4	1121.2	1121.0	1120.7	1120.5
7.5°	1107.3	1109.1	1110.8	1111.5	1111.3	1111.0	1110.8	1110.5
10°	1098.5	1100.2	1102.0	1102.7	1102.4	1102.2	1102.0	1101.7
12.5°	1088.1	1089.4	1090.7	1091.0	1090.5	1089.8	1089.2	1088.5
15°	1068.4	1069.8	1071.3	1071.5	1070.6	1069.6	1068.6	1067.6
17.5°	1043.3	1044.3	1045.5	1045.7	1045.1	1044.6	1044.0	1043.4
20°	1023.9	1024.7	1025.4	1025.8	1025.8	1025.8	1025.8	1025.8
22.5°	1004.1	1005.0	1005.9	1006.1	1005.5	1004.9	1004.4	1003.8
25°	972.7	973.7	974.7	974.5	973.3	972.1	970.9	969.6
27.5°	936.2	936.9	937.6	937.8	937.3	936.9	936.4	936.0
30°	911.2	911.7	912.2	912.3	912.1	911.8	911.6	911.3
32.5°	887.5	887.9	888.4	888.5	888.3	888.0	887.8	887.5
35°	849.0	849.7	850.4	850.8	850.8	850.8	850.8	850.8
37.5°	808.5	809.5	810.5	810.9	810.8	810.7	810.6	810.5
40°	781.2	782.2	783.2	783.9	784.4	784.9	785.4	785.9
42.5°	756.0	757.2	758.4	759.0	759.1	759.2	759.4	759.5
45°	715.5	717.2	718.9	719.9	720.2	720.4	720.6	720.9
47.5°	673.8	676.2	678.7	680.2	680.8	681.3	681.8	682.4
50°	646.0	648.7	651.3	653.1	653.8	654.5	655.3	656.0
52.5°	618.2	621.0	623.9	625.7	626.1	626.7	627.3	627.8
55°	574.4	577.1	579.8	581.6	582.6	583.6	584.6	585.5
57.5°	531.2	534.3	537.4	539.2	540.0	540.7	541.4	542.2
60°	501.5	505.2	508.8	511.0	511.8	512.5	513.2	514.0
62.5°	471.5	475.6	479.6	482.1	483.1	484.0	484.9	485.8
65°	426.6	430.3	434.0	436.3	437.3	438.3	439.3	440.3
67.5°	380.7	385.1	389.6	392.5	393.7	395.0	396.2	397.5
70°	349.4	354.0	358.7	361.7	363.2	364.7	366.2	367.6
72.5°	320.2	325.3	330.3	333.4	334.4	335.5	336.6	337.7
75°	276.1	281.0	285.9	288.9	290.2	291.4	292.6	293.8
77.5°	232.0	237.3	242.7	245.9	246.9	247.9	248.8	249.8
80°	205.5	210.9	216.3	219.5	220.5	221.4	222.4	223.4
82.5°	180.5	185.7	190.9	194.4	196.2	197.9	199.7	201.4
85°	146.1	151.5	156.9	160.5	162.5	164.4	166.4	168.4
87.5°	119.9	125.6	131.3	135.2	136.9	138.6	140.4	142.1
90°	109.9	115.9	122.1	126.6	128.3	130.0	132.2	134.0
92.5°	180.0	162.8	153.4	150.2	145.9	146.5	147.6	148.5
95°	425.5	360.2	308.3	272.9	241.6	229.3	227.3	221.5
97.5°	583.1	538.7	488.1	437.2	410.1	385.7	373.9	369.6
100°	652.7	635.1	592.3	547.2	516.7	484.6	468.9	462.9
102.5°	673.8	692.8	674.7	645.1	612.3	590.0	572.7	568.7
105°	652.6	721.2	746.6	744.7	731.6	718.0	710.4	706.5
107.5°	594.8	684.6	742.0	769.5	778.5	779.9	778.4	776.2
110°	552.1	645.1	715.3	758.1	780.7	791.2	796.2	797.9





TEST NUMBER: P333264-930

CATALOG NUMBER: S125DIP-S1090D590U930-4F0-1E-UDD-D4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	517.7	606.1	676.9	726.5	758.8	775.7	785.5	790.6
115°	474.0	550.5	618.6	672.2	710.0	733.8	748.3	755.8
117.5°	443.5	509.8	568.8	618.2	656.2	680.9	695.5	700.9
120°	426.6	486.6	541.8	585.6	621.5	645.3	659.3	664.5
122.5°	412.6	468.3	517.9	558.9	591.0	612.9	627.0	631.8
125°	392.6	444.0	488.4	524.4	551.7	572.0	583.4	589.3
127.5°	372.1	420.0	461.4	495.2	520.3	538.6	549.7	553.1
130°	359.8	404.1	443.8	476.4	500.8	517.4	528.0	532.0
132.5°	346.9	388.7	425.0	456.4	480.7	497.0	506.6	510.8
135°	329.1	364.4	397.3	426.0	447.7	464.2	473.9	477.8
137.5°	314.3	343.2	370.8	395.2	414.5	429.4	438.1	442.2
140°	305.7	330.3	354.3	375.7	393.9	406.9	414.9	418.2
142.5°	298.3	319.1	339.8	358.4	374.0	385.2	392.8	395.7
145°	289.4	305.0	320.7	334.4	346.5	355.4	361.4	364.3
147.5°	281.8	293.9	305.3	315.3	324.5	331.3	334.7	336.0
150°	277.6	287.9	296.7	305.2	312.4	318.3	320.3	321.1
152.5°	273.9	283.1	291.1	297.7	303.6	308.1	310.0	310.5
155°	268.3	275.8	282.3	287.4	292.0	295.3	296.7	297.2
157.5°	262.8	268.9	273.9	277.9	281.5	284.2	285.5	285.4
160°	259.0	263.7	268.3	271.6	274.8	277.2	278.1	277.6
162.5°	254.9	259.3	263.1	266.0	268.6	270.5	270.7	270.6
165°	249.2	252.5	255.4	257.6	259.5	260.4	260.4	260.4
167.5°	243.9	246.1	248.2	249.8	250.8	251.6	251.2	251.1
170°	240.9	242.3	243.7	244.6	245.6	246.1	246.1	245.6
172.5°	237.6	239.0	239.9	240.5	240.8	241.6	240.8	240.4
175°	233.9	233.9	234.9	234.9	234.9	235.3	234.4	233.9
177.5°	231.4	231.8	231.8	231.8	231.4	231.8	230.6	230.6
180°	230.6	230.6	230.6	230.6	230.6	230.6	230.6	230.6

(END OF REPORT)