

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: P332311-927

Luminaire Tested: **S123RDIP-S775D585U927-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332311-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDIP-S775D585U927-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 585 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3991.5 lumens
Efficiency: N/A
Efficacy: 99.0 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: General Diffuse

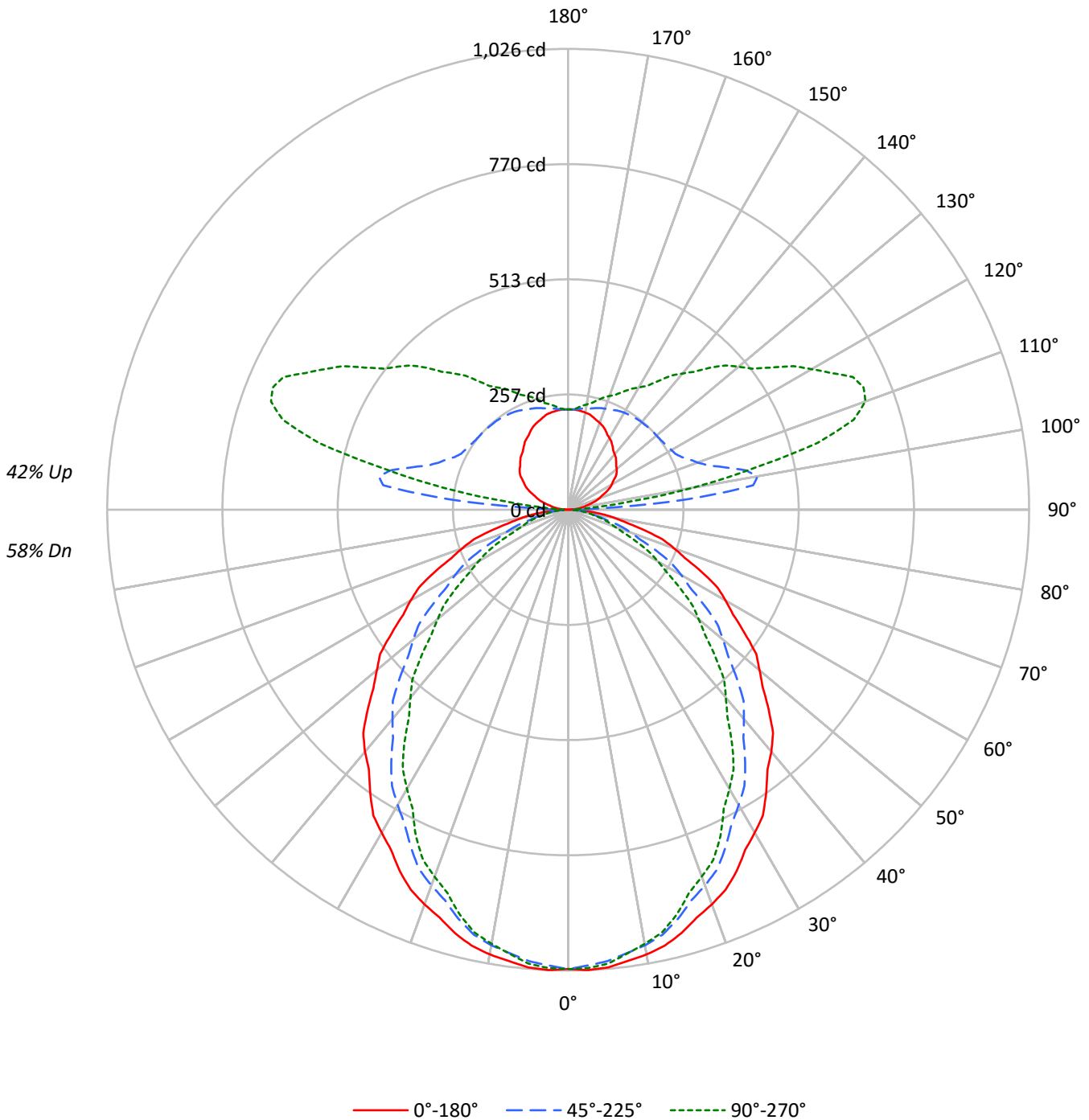
Input Watts (W): 40.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332311-927

CATALOG NUMBER: S123RDIP-S775D585U927-4F0-1E-UDD-F4

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	109	109	109	109	102	102	102	102	88	88	88	75	75	75	63	63	63	58
1	100	96	92	88	93	89	86	83	78	75	73	67	65	63	57	55	54	50
2	91	84	78	73	85	79	73	69	68	64	61	59	56	53	50	48	46	42
3	84	74	67	61	78	69	63	58	61	56	52	52	49	46	45	42	40	36
4	77	66	58	52	71	62	55	49	54	49	44	47	43	39	40	37	35	31
5	70	59	51	45	66	55	48	43	49	43	39	42	38	34	37	33	30	27
6	65	53	45	39	61	50	43	37	44	38	34	38	34	30	33	30	27	24
7	60	48	40	35	56	45	38	33	40	34	30	35	30	27	30	27	24	22
8	56	44	36	31	52	41	34	29	37	31	27	32	28	24	28	24	22	19
9	52	40	33	28	49	38	31	26	34	28	24	30	25	22	26	22	20	18
10	49	37	30	25	46	35	28	24	31	26	22	27	23	20	24	21	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11009	11009	11009
5°	11051	10899	10962
10°	10989	10762	10726
15°	10871	10510	10399
20°	10709	10195	9958
25°	10542	9841	9526
30°	10320	9434	8918
35°	10093	9025	8360
40°	9884	8543	7669
45°	9608	8068	7046
50°	9306	7529	6348
55°	8997	6912	5697
60°	8714	6250	4982
65°	8344	5535	4266
70°	7884	4648	3446
75°	7207	3656	3244
80°	6428	3242	2982
85°	5434	2865	2655



TEST NUMBER: P332311-927

CATALOG NUMBER: S123RDIP-S775D585U927-4F0-1E-UDD-F4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.0	2.4
10°-20°	267.2	6.7
20°-30°	384.8	9.6
30°-40°	433.4	10.9
40°-50°	414.6	10.4
50°-60°	339.6	8.5
60°-70°	229.1	5.7
70°-80°	115.3	2.9
80°-90°	32.2	0.8
90°-100°	124.2	3.1
100°-110°	351.7	8.8
110°-120°	346.0	8.7
120°-130°	276.0	6.9
130°-140°	217.6	5.5
140°-150°	162.4	4.1
150°-160°	113.2	2.8
160°-170°	66.5	1.7
170°-180°	21.6	0.5
0°-30°	748.0	18.7
0°-40°	1181.5	29.6
0°-60°	1935.6	48.5
0°-90°	2312.2	57.9
90°-120°	822.0	20.6
90°-150°	1478.0	37.0
90°-180°	1679.0	42.1
0°-180°	3991.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1023	1023	1023	1023	1023	
5°	1023	1018	1009	1016	1014	97
15°	976	966	943	939	933	275
25°	888	866	829	812	802	408
35°	768	737	687	652	636	481
45°	631	592	530	484	463	487
55°	479	437	368	322	304	430
65°	328	281	217	178	168	324
75°	173	133	88	80	78	185
85°	44	27	23	22	22	49
90°	1	5	11	13	13	3
95°	15	50	268	78	52	17
105°	52	78	363	635	575	56
115°	93	115	278	609	699	92
125°	129	152	259	470	551	114
135°	151	180	256	387	447	117
145°	172	197	252	317	349	108
155°	196	211	244	278	290	90
165°	214	220	234	248	252	60
175°	223	223	225	228	227	21
180°	223	223	223	223	223	



TEST NUMBER: P332311-927

CATALOG NUMBER: S123RDIP-S775D585U927-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8
2.5°	1026.0	1025.5	1024.8	1024.3	1023.7	1022.5	1020.7	1019.0	1017.2	1015.4	1017.1
5°	1022.8	1021.8	1020.9	1020.0	1019.1	1017.5	1015.3	1013.0	1010.8	1008.7	1010.3
7.5°	1013.3	1012.3	1011.3	1010.3	1009.3	1007.3	1004.5	1001.6	998.8	995.9	996.8
10°	1005.4	1004.0	1002.7	1001.5	1000.1	997.8	994.5	991.3	987.9	984.6	984.8
12.5°	994.0	992.6	991.2	989.8	988.3	985.6	981.5	977.5	973.4	969.3	969.2
15°	975.5	973.4	971.4	969.4	967.3	963.8	958.6	953.5	948.2	943.1	942.2
17.5°	952.0	949.7	947.4	945.0	942.6	938.2	931.6	925.0	918.5	912.0	910.0
20°	934.9	931.8	928.9	926.0	923.1	918.1	911.0	904.0	897.1	890.0	887.6
22.5°	915.6	912.2	908.8	905.4	902.0	896.6	889.1	881.7	874.3	866.8	863.8
25°	887.6	883.0	878.3	873.7	869.1	862.5	854.1	845.6	837.1	828.6	824.7
27.5°	853.5	848.4	843.4	838.3	833.2	825.9	816.5	807.1	797.6	788.1	782.8
30°	830.3	824.7	819.3	813.7	808.2	800.3	790.0	779.6	769.3	759.0	752.7
32.5°	807.1	800.8	794.6	788.3	782.0	773.4	762.5	751.6	740.7	729.8	722.9
35°	768.1	761.4	754.8	748.2	741.6	732.5	721.1	709.6	698.2	686.8	678.9
37.5°	728.6	721.2	713.8	706.5	699.1	689.4	677.2	665.0	652.8	640.6	631.5
40°	703.4	695.3	687.1	679.1	671.0	660.4	647.3	634.2	621.1	608.0	598.4
42.5°	674.9	666.8	658.6	650.5	642.5	631.6	618.1	604.5	591.0	577.5	567.0
45°	631.2	623.0	614.7	606.3	598.0	586.8	572.6	558.4	544.2	530.0	519.5
47.5°	587.6	578.5	569.4	560.3	551.2	539.6	525.4	511.1	496.9	482.8	471.3
50°	555.7	547.1	538.4	529.7	521.1	509.3	494.4	479.4	464.5	449.6	438.2
52.5°	527.2	517.8	508.4	499.0	489.6	477.5	462.7	448.0	433.2	418.4	406.5
55°	479.4	470.4	461.4	452.3	443.3	430.9	415.3	399.7	384.0	368.3	357.6
57.5°	435.3	425.5	415.7	405.8	395.9	383.2	367.4	351.6	335.9	320.2	310.1
60°	404.8	394.7	384.5	374.4	364.2	351.5	336.2	320.9	305.6	290.3	280.4
62.5°	374.2	364.1	353.9	343.8	333.7	321.0	305.7	290.4	275.1	259.8	250.4
65°	327.6	317.5	307.4	297.2	287.1	274.8	260.5	246.1	231.7	217.3	208.3
67.5°	281.1	270.8	260.5	250.3	240.0	228.0	214.2	200.4	186.6	172.9	166.1
70°	250.5	240.6	230.6	220.6	210.7	199.2	186.3	173.5	160.6	147.7	141.2
72.5°	220.0	210.2	200.3	190.5	180.8	170.0	158.3	146.6	134.8	123.1	117.8
75°	173.3	164.5	155.7	146.8	138.0	128.5	118.4	108.2	98.1	87.9	86.1
77.5°	130.9	122.9	114.9	106.9	98.9	91.7	85.1	78.6	72.1	65.5	64.6
80°	103.7	96.1	88.6	81.0	73.4	67.7	63.8	60.0	56.2	52.3	51.7
82.5°	77.8	71.3	64.7	58.2	51.7	47.5	45.7	43.9	42.1	40.3	39.8
85°	44.0	39.9	35.9	31.8	27.7	25.4	24.9	24.3	23.8	23.2	22.9
87.5°	16.1	14.7	13.2	11.9	10.5	9.8	10.1	10.4	10.6	10.9	10.6
90°	0.9	1.8	2.7	4.0	5.0	5.9	7.2	8.6	9.9	11.3	10.9
92.5°	5.6	8.3	12.1	15.6	19.4	26.1	37.9	57.4	76.4	69.5	52.4
95°	15.4	16.7	21.7	29.4	41.1	58.7	97.1	164.5	238.6	267.9	217.3
97.5°	26.2	26.7	30.6	37.2	48.8	67.9	104.6	180.5	304.0	415.3	444.3
100°	33.4	33.9	37.1	43.4	54.2	71.9	103.5	170.3	289.1	427.9	516.9
102.5°	41.0	41.8	44.7	50.6	60.4	76.5	104.9	161.7	267.5	404.4	520.5
105°	52.4	53.8	56.5	61.9	70.5	84.5	108.9	155.4	240.8	363.3	493.0
107.5°	64.5	65.9	68.5	73.8	81.9	94.9	116.3	155.0	223.9	326.9	444.7
110°	73.2	74.5	76.8	81.8	89.4	102.1	122.5	156.8	217.3	306.3	414.3



TEST NUMBER: P332311-927

CATALOG NUMBER: S123RDIP-S775D585U927-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	81.1	82.5	84.8	89.8	97.4	109.7	128.6	160.4	213.7	292.6	387.9
115°	92.6	94.4	97.1	101.6	109.3	121.5	138.7	166.3	212.4	277.9	356.1
117.5°	104.1	106.2	108.4	112.6	121.2	132.5	149.5	174.0	213.2	269.2	336.8
120°	112.1	113.4	115.7	120.2	128.8	140.1	156.3	179.8	214.6	265.2	326.7
122.5°	118.9	120.3	122.6	127.4	135.6	147.7	163.6	185.3	217.1	262.7	318.4
125°	128.8	129.7	132.4	137.4	145.9	158.1	174.0	193.8	220.9	259.4	307.7
127.5°	136.3	137.6	141.0	146.0	155.5	167.7	183.0	200.9	225.3	257.7	298.3
130°	141.0	142.4	146.4	151.8	161.3	173.5	188.4	205.6	228.1	256.7	293.3
132.5°	144.6	146.3	150.8	157.2	166.8	178.6	193.1	209.9	230.4	256.3	288.5
135°	150.9	152.7	157.7	164.5	174.0	186.2	200.2	215.6	233.6	255.7	282.4
137.5°	156.9	158.8	163.7	170.9	180.3	191.5	205.0	219.7	235.8	254.8	277.1
140°	160.9	163.1	167.6	174.8	183.9	195.2	208.3	221.9	237.2	254.4	273.8
142.5°	165.2	167.1	172.0	178.5	187.5	198.1	210.8	224.0	238.3	253.7	270.9
145°	172.1	173.5	177.6	184.3	192.0	202.4	214.2	226.4	239.0	252.5	267.0
147.5°	179.2	180.0	184.0	189.9	197.3	206.1	216.9	227.8	239.0	250.9	263.2
150°	183.9	184.3	188.0	193.8	200.2	208.3	218.7	228.1	239.0	249.4	260.7
152.5°	188.6	188.7	192.3	197.5	203.0	210.8	219.8	228.9	238.0	247.6	257.9
155°	195.7	195.7	198.4	202.9	207.9	214.2	221.9	229.1	236.8	244.5	253.5
157.5°	201.2	201.6	203.7	207.8	212.0	216.9	223.0	229.6	235.2	241.6	248.6
160°	205.6	205.6	207.4	211.0	214.2	218.7	224.1	229.6	234.5	239.5	245.3
162.5°	208.8	208.8	210.3	213.2	215.9	219.8	224.5	229.2	233.1	237.3	242.1
165°	213.7	213.3	214.2	216.4	218.2	221.4	225.0	228.1	230.9	234.1	237.7
167.5°	217.5	216.9	217.3	219.0	220.3	222.3	224.9	227.4	228.7	230.8	233.5
170°	219.6	218.7	219.1	220.5	221.4	222.3	224.6	226.4	227.3	228.6	230.9
172.5°	221.0	220.5	220.6	221.6	222.1	222.7	224.6	226.0	226.2	226.8	228.4
175°	222.8	222.3	221.9	222.8	222.8	223.2	224.1	225.0	224.6	224.6	225.5
177.5°	223.6	223.2	222.8	223.2	223.2	223.2	223.6	224.3	223.6	223.2	223.6
180°	223.2	223.2	223.2	223.2	223.2	223.2	223.2	223.2	223.2	223.2	223.2



TEST NUMBER: P332311-927

CATALOG NUMBER: S123RDIP-S775D585U927-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8	1022.8
2.5°	1018.7	1020.3	1021.9	1022.6	1022.3	1022.0	1021.7	1021.4
5°	1011.9	1013.6	1015.3	1015.9	1015.6	1015.2	1014.8	1014.5
7.5°	997.8	998.6	999.6	999.7	999.1	998.5	997.8	997.2
10°	985.0	985.2	985.3	985.0	984.0	983.1	982.2	981.3
12.5°	969.1	969.0	968.9	968.3	967.3	966.1	965.1	964.0
15°	941.3	940.3	939.4	938.3	937.1	935.7	934.5	933.2
17.5°	908.0	906.1	904.1	902.2	900.2	898.3	896.4	894.5
20°	885.3	882.8	880.4	878.1	875.9	873.7	871.5	869.3
22.5°	860.9	857.9	854.8	852.3	850.2	848.2	846.1	844.1
25°	820.9	817.1	813.2	810.2	808.2	806.1	804.1	802.1
27.5°	777.4	772.1	766.7	762.4	759.3	756.2	753.1	750.0
30°	746.5	740.1	733.9	729.3	726.4	723.4	720.4	717.5
32.5°	716.1	709.2	702.3	697.4	694.3	691.2	688.1	685.0
35°	671.0	663.1	655.1	649.5	646.2	642.9	639.5	636.2
37.5°	622.5	613.5	604.5	598.0	593.9	589.8	585.7	581.6
40°	588.8	579.2	569.7	562.8	558.5	554.3	550.0	545.8
42.5°	556.5	546.1	535.6	528.5	524.7	520.9	517.1	513.3
45°	509.1	498.5	488.0	480.5	476.1	471.7	467.3	462.9
47.5°	459.9	448.5	437.0	429.4	425.4	421.4	417.6	413.6
50°	426.7	415.3	403.9	396.0	391.8	387.5	383.3	379.1
52.5°	394.7	382.8	370.9	363.1	359.3	355.5	351.6	347.8
55°	346.9	336.2	325.5	318.3	314.7	310.9	307.3	303.6
57.5°	300.0	289.9	279.8	273.1	270.1	266.9	263.7	260.6
60°	270.4	260.5	250.5	244.0	240.8	237.7	234.6	231.4
62.5°	241.1	231.7	222.4	216.0	212.7	209.5	206.2	202.9
65°	199.2	190.2	181.2	175.6	173.6	171.6	169.6	167.5
67.5°	159.4	152.7	145.8	141.4	139.3	137.0	134.9	132.7
70°	134.8	128.3	121.8	117.6	115.6	113.5	111.5	109.5
72.5°	112.6	107.3	102.0	98.9	98.1	97.3	96.4	95.5
75°	84.2	82.4	80.6	79.5	79.1	78.7	78.3	78.0
77.5°	63.5	62.5	61.6	60.8	60.5	60.1	59.7	59.4
80°	51.2	50.6	50.1	49.6	49.2	48.9	48.5	48.1
82.5°	39.2	38.7	38.1	37.8	37.7	37.6	37.5	37.5
85°	22.5	22.1	21.8	21.5	21.5	21.5	21.5	21.5
87.5°	10.6	10.5	10.5	10.5	10.3	10.2	10.1	9.9
90°	11.3	11.7	12.2	13.1	12.7	13.1	13.5	13.1
92.5°	38.0	30.2	26.7	24.3	23.5	22.1	22.6	21.8
95°	162.6	110.3	86.3	70.0	61.5	57.4	54.2	52.4
97.5°	405.5	324.8	266.5	212.5	179.1	158.8	146.6	142.7
100°	532.7	496.1	443.2	379.1	333.4	300.5	282.9	283.3
102.5°	575.0	573.9	543.0	502.3	466.8	440.7	426.0	415.6
105°	587.4	632.6	641.2	629.4	608.6	591.4	577.0	574.7
107.5°	551.8	625.2	664.7	680.8	681.2	675.4	670.5	666.4
110°	517.8	600.9	657.9	689.5	702.2	705.8	704.9	703.9



TEST NUMBER: P332311-927

CATALOG NUMBER: S123RDIP-S775D585U927-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	484.2	569.1	633.0	673.6	696.7	708.0	711.4	711.5
115°	439.7	518.2	584.7	633.9	667.8	687.7	696.7	699.0
117.5°	407.3	475.2	534.9	584.9	620.2	642.9	656.0	659.0
120°	390.4	451.4	505.6	551.3	586.9	612.3	623.1	625.8
122.5°	377.0	432.2	482.4	524.8	556.6	579.3	591.3	594.7
125°	359.2	408.4	451.9	488.0	516.9	536.8	548.1	551.3
127.5°	343.6	387.6	426.7	459.6	485.4	502.3	512.5	515.5
130°	333.9	374.5	411.1	441.9	465.9	482.1	491.6	495.2
132.5°	324.9	362.3	396.3	425.6	448.1	464.4	472.8	475.3
135°	312.7	344.8	374.1	399.9	422.0	435.5	443.7	446.9
137.5°	301.6	327.9	353.2	375.5	394.1	407.8	414.7	416.8
140°	295.1	318.1	339.8	359.2	376.4	389.0	396.2	395.8
142.5°	288.9	308.7	327.5	344.4	359.0	370.3	376.8	376.3
145°	281.5	296.4	310.9	324.0	335.3	344.8	348.4	349.3
147.5°	275.4	287.2	299.0	308.2	316.8	323.2	326.7	327.0
150°	271.1	281.5	291.0	299.6	306.3	311.3	314.0	314.0
152.5°	267.1	276.1	284.5	291.6	296.9	301.6	303.2	303.2
155°	261.2	268.4	275.2	280.6	284.6	288.3	289.1	289.6
157.5°	254.8	260.9	266.2	270.4	273.9	276.6	277.3	277.3
160°	251.2	256.2	260.7	263.9	267.0	269.7	269.7	269.3
162.5°	246.9	251.1	255.3	258.1	260.2	262.5	262.5	262.1
165°	241.3	244.0	247.2	249.4	251.2	253.0	252.5	252.5
167.5°	236.4	238.4	240.3	241.9	242.7	244.0	243.5	243.5
170°	233.1	234.5	236.3	237.2	237.7	238.6	238.1	238.1
172.5°	230.3	231.2	232.7	233.2	233.3	234.2	233.5	233.1
175°	226.4	226.8	227.8	227.8	227.8	228.1	227.8	227.3
177.5°	223.9	224.3	224.7	224.7	224.3	224.7	223.9	223.9
180°	223.2	223.2	223.2	223.2	223.2	223.2	223.2	223.2

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