

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: P332549-930

Luminaire Tested: **S124DIP-S575D590U930-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332549-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIP-S575D590U930-4F0-1E-UDD-D4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 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: 3654.3 lumens
Efficiency: N/A
Efficacy: 111.4 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: General Diffuse

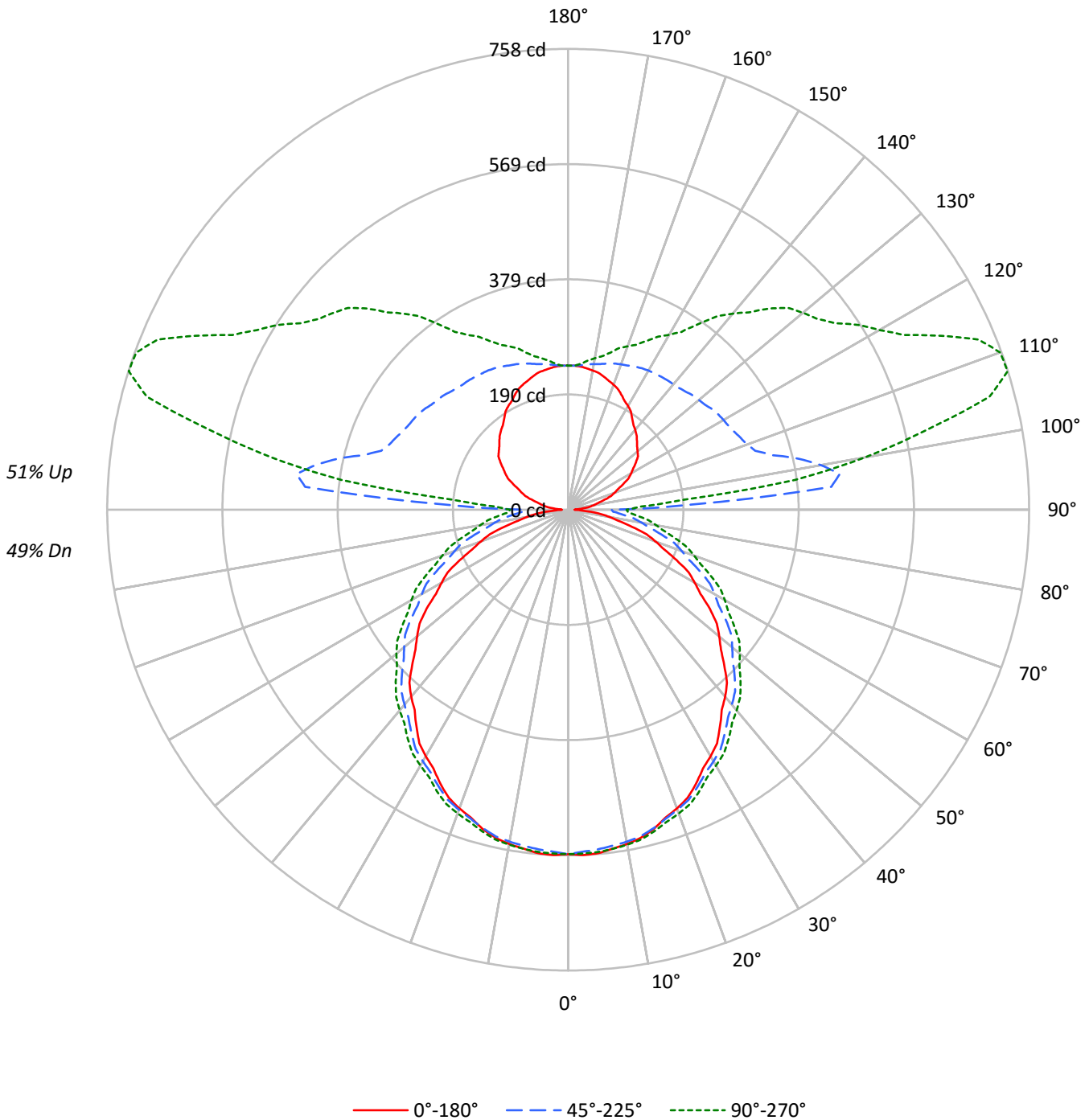
Input Watts (W): 32.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332549-930

CATALOG NUMBER: S124DIP-S575D590U930-4F0-1E-UDD-D4

Luminous Intensity Polar Plot





TEST NUMBER: P332549-930

CATALOG NUMBER: S124DIP-S575D590U930-4F0-1E-UDD-D4

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	107	107	107	107	98	98	98	98	83	83	83		68	68	68		55	55	55	49
1	97	92	88	84	89	85	81	78	71	68	66		59	57	55		47	46	45	39
2	87	80	73	68	80	73	68	63	62	57	54		51	48	45		41	39	37	32
3	80	70	62	56	73	64	57	52	54	49	45		45	41	38		36	33	31	27
4	73	61	53	47	66	57	49	44	48	42	38		40	35	32		32	29	26	22
5	67	54	46	40	61	50	43	37	43	37	32		35	31	27		29	25	23	19
6	61	49	40	34	56	45	38	32	38	32	28		32	27	24		26	22	20	17
7	56	44	36	30	52	41	33	28	35	29	25		29	24	21		24	20	17	15
8	52	40	32	26	48	37	30	25	31	26	22		26	22	19		22	18	16	13
9	49	36	29	23	45	34	27	22	29	23	19		24	20	17		20	16	14	12
10	45	33	26	21	42	31	24	20	26	21	17		22	18	15		18	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4574	4574	4574
5°	4588	4470	4482
10°	4560	4397	4393
15°	4519	4312	4289
20°	4458	4219	4187
25°	4388	4114	4074
30°	4313	4011	3959
35°	4227	3903	3858
40°	4160	3802	3753
45°	4059	3708	3663
50°	3973	3600	3567
55°	3884	3499	3454
60°	3746	3369	3353
65°	3597	3231	3227
70°	3414	3072	3080
75°	3157	2896	2948
80°	2873	2730	2819
85°	2514	2579	2742



TEST NUMBER: P332549-930

CATALOG NUMBER: S124DIP-S575D590U930-4F0-1E-UDD-D4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.6	1.5
10°-20°	153.7	4.2
20°-30°	232.4	6.4
30°-40°	281.2	7.7
40°-50°	297.3	8.1
50°-60°	279.8	7.7
60°-70°	232.1	6.4
70°-80°	163.1	4.5
80°-90°	93.5	2.6
90°-100°	225.7	6.2
100°-110°	396.4	10.8
110°-120°	345.9	9.5
120°-130°	283.5	7.8
130°-140°	230.2	6.3
140°-150°	172.1	4.7
150°-160°	120.1	3.3
160°-170°	70.6	1.9
170°-180°	23.0	0.6
0°-30°	439.8	12.0
0°-40°	721.0	19.7
0°-60°	1298.1	35.5
0°-90°	1786.8	48.9
90°-120°	968.0	26.5
90°-150°	1653.8	45.3
90°-180°	1867.0	51.1
0°-180°	3654.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	567	567	567	567	567	
5°	567	565	561	566	565	54
15°	544	544	542	548	548	153
25°	497	501	503	510	511	229
35°	435	443	449	458	460	272
45°	363	375	387	397	401	280
55°	284	298	317	329	333	253
65°	197	217	239	254	260	195
75°	109	133	159	176	183	116
85°	34	60	89	107	114	36
90°	11	39	71	90	96	8
95°	24	78	434	259	192	24
105°	60	98	347	714	717	64
115°	100	131	302	566	676	99
125°	136	161	288	474	535	121
135°	160	190	274	410	468	124
145°	183	209	267	337	372	115
155°	208	224	260	294	306	96
165°	226	234	249	263	267	64
175°	236	237	239	242	241	22
180°	237	237	237	237	237	



TEST NUMBER: P332549-930

CATALOG NUMBER: S124DIP-S575D590U930-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6
2.5°	568.6	568.3	567.9	567.5	567.2	566.6	565.7	564.8	563.9	563.0	563.8
5°	567.2	566.8	566.3	565.9	565.5	564.8	563.8	562.8	561.8	560.8	562.0
7.5°	562.4	562.1	561.8	561.6	561.3	560.8	560.0	559.2	558.3	557.5	558.8
10°	558.3	558.2	558.0	557.9	557.7	557.3	556.6	555.9	555.2	554.5	555.8
12.5°	552.7	552.7	552.7	552.6	552.6	552.4	551.9	551.4	550.9	550.4	551.5
15°	543.7	543.9	544.0	544.1	544.3	544.1	543.7	543.3	542.8	542.4	543.7
17.5°	531.4	531.8	532.2	532.6	533.1	533.3	533.2	533.1	533.0	533.0	534.2
20°	522.8	523.2	523.6	524.1	524.5	524.7	524.9	525.1	525.1	525.3	526.7
22.5°	513.1	513.6	514.2	514.7	515.3	515.7	515.9	516.2	516.4	516.7	518.1
25°	497.4	498.2	499.1	499.9	500.8	501.4	501.8	502.2	502.7	503.1	504.7
27.5°	479.9	481.1	482.3	483.6	484.9	485.8	486.4	487.1	487.7	488.4	489.8
30°	468.2	469.4	470.4	471.6	472.7	473.8	474.7	475.7	476.7	477.8	479.3
32.5°	455.5	456.9	458.2	459.6	461.0	462.2	463.3	464.4	465.5	466.6	468.3
35°	435.2	436.9	438.6	440.3	442.0	443.5	444.9	446.4	447.8	449.1	451.2
37.5°	414.8	416.7	418.7	420.6	422.6	424.4	426.2	428.0	429.7	431.4	433.4
40°	401.6	403.4	405.3	407.1	409.0	410.8	412.8	414.7	416.8	418.7	420.9
42.5°	386.4	388.4	390.4	392.6	394.6	396.8	399.1	401.4	403.7	406.0	408.4
45°	362.9	365.6	368.3	371.0	373.6	376.3	379.0	381.6	384.3	387.0	389.4
47.5°	340.5	343.2	345.9	348.7	351.5	354.4	357.5	360.6	363.7	366.8	369.3
50°	324.2	327.3	330.4	333.5	336.6	339.7	342.8	345.9	349.0	352.1	354.9
52.5°	307.9	311.0	314.1	317.2	320.3	323.7	327.3	330.8	334.4	337.9	340.7
55°	284.2	287.1	290.2	293.1	296.0	299.6	303.9	308.1	312.3	316.6	319.4
57.5°	257.7	261.4	265.1	268.7	272.4	276.3	280.5	284.7	288.9	293.1	296.4
60°	240.4	244.1	247.8	251.4	255.1	259.3	263.9	268.6	273.2	277.9	281.1
62.5°	223.7	227.7	231.7	235.7	239.7	244.0	248.7	253.3	258.0	262.7	265.9
65°	196.7	201.2	205.7	210.2	214.7	219.4	224.1	228.9	233.7	238.6	242.1
67.5°	170.6	175.5	180.3	185.1	189.8	194.8	199.9	205.0	210.2	215.3	218.9
70°	152.9	157.7	162.5	167.3	172.1	177.2	182.5	187.8	193.2	198.6	202.4
72.5°	135.7	140.6	145.4	150.3	155.2	160.5	166.2	171.9	177.7	183.4	187.0
75°	109.1	114.3	119.5	124.7	130.0	135.6	141.5	147.4	153.4	159.2	163.2
77.5°	84.4	89.9	95.5	100.9	106.5	112.3	118.5	124.7	130.9	137.1	141.1
80°	69.1	74.8	80.5	86.1	91.7	97.6	103.9	110.1	116.3	122.5	126.7
82.5°	53.9	59.8	65.6	71.5	77.4	83.4	89.6	95.8	102.0	108.3	112.6
85°	33.6	39.5	45.5	51.4	57.3	63.4	69.8	76.1	82.5	88.8	93.0
87.5°	18.8	24.8	30.8	36.7	42.6	48.5	55.2	61.4	67.8	74.1	78.1
90°	10.6	17.2	24.2	30.3	36.4	42.3	51.1	57.2	64.2	71.2	74.8
92.5°	14.9	22.4	31.9	42.6	54.5	69.7	99.5	141.6	182.8	207.2	186.6
95°	23.6	29.7	39.0	49.7	65.5	90.2	136.5	218.5	335.4	434.2	448.7
97.5°	35.1	39.1	47.0	56.6	70.2	91.4	128.3	197.0	313.2	450.5	544.6
100°	42.3	46.0	52.9	62.1	74.7	94.1	127.0	185.2	285.5	422.2	545.0
102.5°	49.7	53.7	59.8	68.2	79.9	98.3	128.6	180.2	266.4	388.0	514.5
105°	60.1	64.3	69.5	77.9	89.1	106.6	134.1	178.0	248.3	347.0	459.8
107.5°	72.8	76.1	80.7	88.9	99.3	116.2	141.6	181.7	242.3	322.5	415.2
110°	80.9	83.8	88.1	95.6	106.0	122.0	147.4	184.9	241.0	313.3	392.4



TEST NUMBER: P332549-930

CATALOG NUMBER: S124DIP-S575D590U930-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	88.5	91.2	95.7	102.6	112.8	128.6	153.0	188.4	240.9	307.4	378.2
115°	99.6	102.2	106.8	112.8	122.9	138.3	161.4	193.8	241.6	301.9	363.6
117.5°	111.8	113.8	117.5	123.4	132.4	147.9	169.7	199.7	242.6	297.6	354.8
120°	119.4	120.8	124.5	130.0	138.4	153.6	175.4	203.7	243.5	295.1	349.5
122.5°	126.9	127.9	131.3	136.1	144.8	159.4	181.0	207.5	244.6	292.2	344.0
125°	136.0	137.7	140.4	145.4	154.1	168.8	189.1	213.9	246.8	288.5	335.7
127.5°	144.6	145.9	149.1	154.8	163.9	178.3	197.1	219.5	247.8	283.6	325.2
130°	148.9	150.6	154.2	161.0	169.7	184.3	202.3	222.7	248.7	280.7	318.6
132.5°	153.7	155.1	159.7	166.2	175.6	189.2	206.8	226.4	249.7	278.3	312.7
135°	159.9	161.8	166.4	174.3	184.0	196.7	213.0	230.7	250.8	274.1	303.3
137.5°	166.6	168.3	173.3	180.7	190.6	202.4	217.1	233.3	250.7	271.1	295.4
140°	171.5	172.8	177.7	185.5	195.1	206.3	220.4	235.4	251.4	269.1	291.0
142.5°	176.2	177.6	182.3	189.8	199.2	209.9	223.4	237.1	252.0	268.2	287.6
145°	183.4	184.7	189.1	195.5	204.2	214.4	226.5	239.0	252.6	266.9	282.7
147.5°	191.7	192.0	196.0	202.5	209.7	218.9	230.2	241.2	253.0	265.3	278.5
150°	196.9	197.2	200.8	206.3	213.1	221.8	232.1	242.3	253.0	264.2	275.8
152.5°	201.2	201.3	205.0	210.2	216.4	224.5	233.6	243.0	252.3	262.3	272.8
155°	207.9	208.4	211.2	215.8	220.9	227.9	235.8	243.7	251.1	259.5	268.3
157.5°	214.5	214.5	217.1	220.7	225.2	230.6	237.4	243.7	250.0	256.7	263.8
160°	218.6	218.6	220.5	223.7	227.4	232.5	238.1	243.7	248.8	254.4	260.5
162.5°	222.3	221.9	223.4	226.3	229.7	233.7	238.9	243.7	247.7	252.2	257.5
165°	226.5	226.5	227.4	229.8	232.1	234.9	239.0	242.8	245.6	248.8	252.6
167.5°	230.6	230.2	230.6	232.4	233.7	235.9	239.0	241.7	243.4	245.5	248.1
170°	232.5	232.1	232.5	233.9	234.9	236.3	238.6	240.9	241.8	243.2	245.1
172.5°	234.4	233.9	234.0	235.1	235.6	236.6	238.2	240.2	240.4	241.0	242.5
175°	236.3	235.8	235.8	236.3	236.8	236.8	237.7	239.0	238.6	238.6	239.5
177.5°	237.1	236.8	236.4	236.8	236.8	236.8	237.1	237.8	237.1	237.1	237.5
180°	236.8	236.8	236.8	236.8	236.8	236.8	236.8	236.8	236.8	236.8	236.8



TEST NUMBER: P332549-930

CATALOG NUMBER: S124DIP-S575D590U930-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6
2.5°	564.6	565.3	566.1	566.5	566.4	566.2	566.1	566.1
5°	563.1	564.2	565.3	565.8	565.7	565.6	565.4	565.2
7.5°	560.1	561.3	562.6	563.2	563.0	562.9	562.7	562.6
10°	557.0	558.3	559.5	560.1	560.0	559.9	559.7	559.5
12.5°	552.8	553.9	555.1	555.6	555.6	555.5	555.5	555.5
15°	544.9	546.3	547.5	548.0	548.0	547.8	547.6	547.5
17.5°	535.5	536.8	538.1	538.7	538.6	538.5	538.3	538.3
20°	528.2	529.5	530.9	531.7	531.7	531.7	531.7	531.7
22.5°	519.5	520.9	522.3	523.2	523.3	523.6	523.8	524.1
25°	506.2	507.8	509.3	510.1	510.3	510.5	510.5	510.7
27.5°	491.3	492.7	494.2	495.0	495.1	495.3	495.5	495.6
30°	480.9	482.4	484.0	484.9	485.1	485.4	485.7	486.0
32.5°	470.1	471.9	473.7	474.7	475.0	475.2	475.6	475.8
35°	453.1	455.1	457.1	458.3	458.7	459.1	459.5	460.0
37.5°	435.5	437.4	439.4	440.7	441.1	441.6	442.0	442.5
40°	423.0	425.1	427.2	428.5	429.1	429.7	430.2	430.8
42.5°	410.7	413.0	415.4	416.8	417.3	417.7	418.2	418.6
45°	391.8	394.2	396.6	398.1	398.8	399.6	400.2	401.0
47.5°	371.8	374.3	376.7	378.4	379.3	380.1	381.0	381.8
50°	357.8	360.6	363.4	365.3	366.1	366.9	367.8	368.6
52.5°	343.6	346.3	349.2	351.0	351.9	352.7	353.5	354.4
55°	322.2	325.1	327.8	329.7	330.5	331.4	332.2	333.0
57.5°	299.8	303.2	306.6	308.6	309.4	310.1	311.0	311.8
60°	284.4	287.6	290.8	293.0	294.2	295.3	296.4	297.6
62.5°	269.1	272.4	275.7	277.8	278.9	280.1	281.2	282.3
65°	245.6	249.2	252.7	254.9	256.1	257.2	258.4	259.5
67.5°	222.5	226.1	229.7	232.0	233.1	234.2	235.3	236.4
70°	206.2	210.0	213.8	216.2	217.2	218.2	219.2	220.1
72.5°	190.7	194.4	198.1	200.5	201.6	202.7	203.8	204.9
75°	167.1	171.0	175.0	177.7	178.9	180.2	181.5	182.7
77.5°	145.2	149.2	153.2	155.9	157.2	158.6	159.9	161.3
80°	130.9	135.1	139.3	142.0	143.2	144.3	145.4	146.6
82.5°	116.9	121.2	125.6	128.4	129.6	130.9	132.1	133.4
85°	97.3	101.5	105.7	108.6	110.0	111.4	112.8	114.2
87.5°	82.3	86.5	90.7	93.4	94.7	96.0	97.2	98.4
90°	79.3	83.9	88.5	91.1	92.7	94.2	94.9	96.0
92.5°	159.1	140.4	130.4	123.6	119.3	117.9	117.4	118.5
95°	407.4	339.2	280.6	238.1	216.5	203.4	196.3	191.5
97.5°	567.9	544.7	503.0	456.8	424.7	397.9	385.1	376.7
100°	616.7	629.8	610.8	578.9	539.3	512.0	499.0	496.3
102.5°	611.4	661.2	671.5	659.6	635.9	616.4	602.8	600.9
105°	569.8	653.8	703.4	724.8	726.8	724.2	718.8	717.2
107.5°	512.9	602.0	670.3	714.0	738.1	749.7	755.4	757.6
110°	478.4	562.1	632.8	686.2	720.3	740.9	750.5	755.8



TEST NUMBER: P332549-930

CATALOG NUMBER: S124DIP-S575D590U930-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	452.2	526.5	593.4	646.6	685.3	710.0	722.8	730.8
115°	424.9	485.1	542.7	589.4	627.0	656.0	671.8	676.5
117.5°	409.1	459.4	505.2	545.0	577.5	602.1	618.2	622.3
120°	401.2	447.3	487.3	522.3	549.9	571.5	584.7	591.0
122.5°	394.2	438.8	475.5	506.3	529.7	548.2	559.5	565.6
125°	383.1	425.7	460.6	487.9	507.4	521.7	531.3	535.0
127.5°	369.7	410.5	445.0	471.0	490.7	503.6	512.1	515.8
130°	359.7	399.0	433.2	459.5	479.4	491.9	500.2	503.9
132.5°	349.7	386.6	419.9	446.2	465.7	479.7	487.6	491.2
135°	334.8	367.4	397.9	422.7	442.2	456.1	464.4	468.0
137.5°	321.8	349.4	375.4	397.8	415.9	429.4	436.3	440.3
140°	314.2	337.9	360.7	381.5	398.4	409.4	416.6	421.0
142.5°	307.5	328.4	348.0	366.0	381.0	391.1	397.5	400.6
145°	298.4	315.1	329.9	343.6	355.8	364.3	369.5	372.3
147.5°	290.9	303.5	314.9	325.4	334.4	341.6	345.6	346.9
150°	287.0	297.7	307.0	315.4	322.8	328.8	331.6	332.1
152.5°	282.8	292.0	300.6	307.5	313.8	318.8	320.4	320.9
155°	276.7	284.1	291.1	296.7	301.4	305.1	306.5	306.5
157.5°	270.1	276.4	282.2	286.7	290.2	293.0	293.8	293.8
160°	266.0	271.2	276.2	280.0	282.7	285.6	286.0	286.0
162.5°	262.0	266.3	270.3	273.7	275.7	278.5	279.0	278.6
165°	256.2	259.0	262.3	264.6	266.5	268.3	267.9	267.4
167.5°	250.8	252.9	255.5	256.9	257.9	259.0	258.9	258.6
170°	247.4	248.8	250.7	252.1	253.0	253.5	253.0	253.0
172.5°	244.4	245.5	246.6	247.6	248.2	248.7	248.2	247.4
175°	240.4	240.9	241.8	241.8	241.8	242.8	241.8	240.9
177.5°	237.8	238.2	238.2	238.6	238.2	238.6	237.8	237.1
180°	236.8	236.8	236.8	236.8	236.8	236.8	236.8	236.8

(END OF REPORT)