

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: P332906-830

Luminaire Tested: **S124RDIP-S575D590U830-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332906-830
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: S124RDIP-S575D590U830-4F0-1E-UDD-F4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 590 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4205.0 lumens
Efficiency: N/A
Efficacy: 128.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

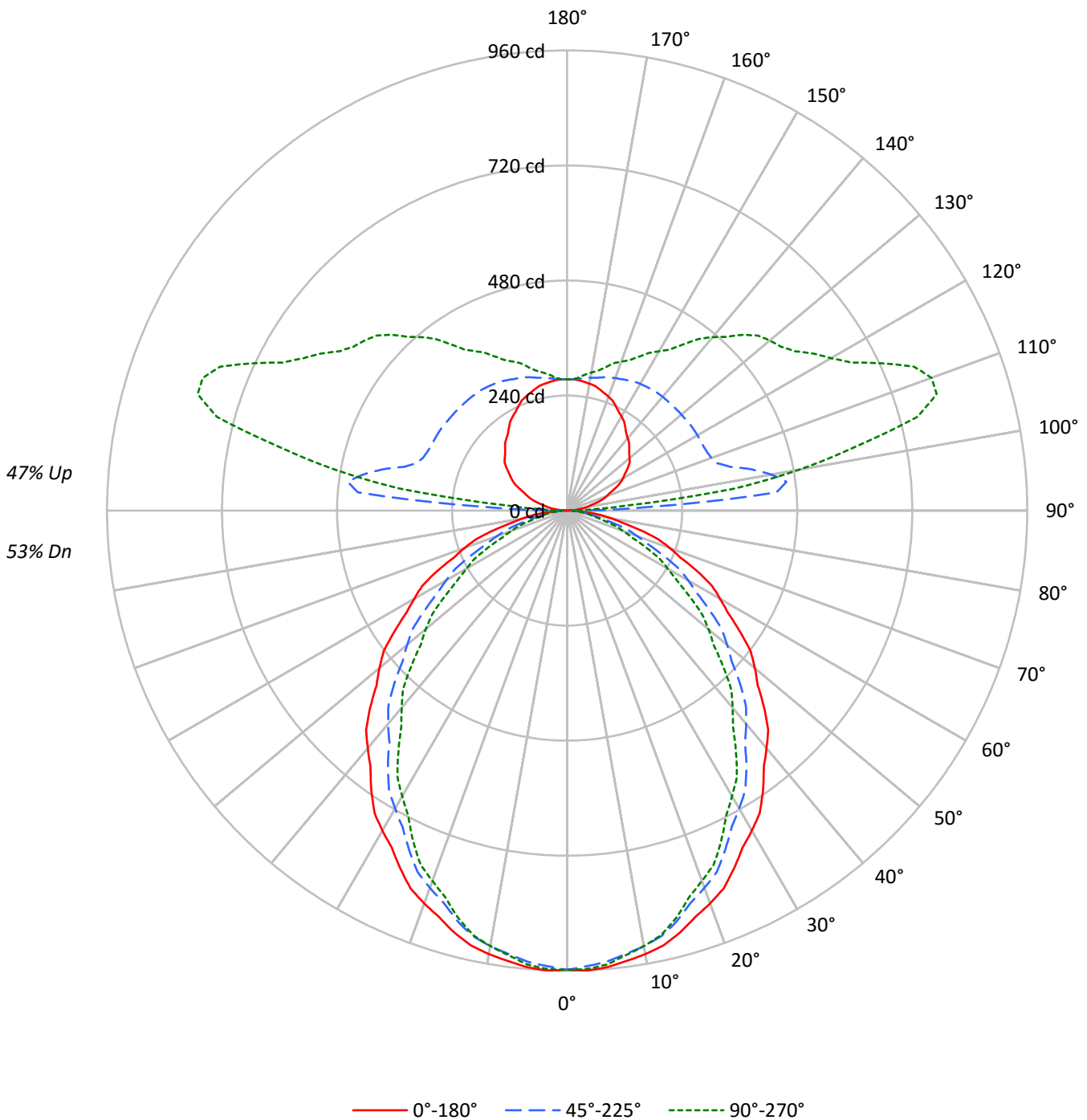
Input Watts (W): 32.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332906-830

CATALOG NUMBER: S124RDIP-S575D590U830-4F0-1E-UDD-F4

Luminous Intensity Polar Plot





TEST NUMBER: P332906-830

CATALOG NUMBER: S124RDIP-S575D590U830-4F0-1E-UDD-F4

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	108	108	108	108	100	100	100	100	85	85	85	71	71	71	59	59	59	53
1	99	94	91	87	91	88	84	81	75	72	70	63	61	60	52	51	50	45
2	90	83	77	72	83	77	72	67	66	62	59	56	53	50	46	44	43	38
3	82	73	66	60	76	68	62	56	58	54	50	49	46	43	41	39	37	33
4	75	65	57	51	70	60	53	48	52	47	42	44	40	37	37	34	32	28
5	69	58	50	44	64	54	47	41	47	41	37	40	36	32	33	30	28	25
6	64	52	44	38	59	49	41	36	42	36	32	36	32	28	30	27	25	22
7	59	47	39	34	55	44	37	32	38	33	29	33	28	25	28	24	22	19
8	55	43	35	30	51	40	33	28	35	29	25	30	26	23	26	22	20	17
9	51	39	32	27	47	37	30	25	32	27	23	28	23	20	24	20	18	16
10	48	36	29	24	44	34	27	23	30	24	21	26	21	18	22	19	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7733	7733	7733
5°	7750	7656	7703
10°	7702	7564	7564
15°	7614	7405	7350
20°	7491	7196	7064
25°	7337	6951	6774
30°	7185	6693	6413
35°	7019	6427	6050
40°	6817	6122	5658
45°	6632	5819	5259
50°	6420	5471	4835
55°	6194	5111	4376
60°	5945	4713	3907
65°	5717	4216	3446
70°	5384	3670	2924
75°	4966	3044	2380
80°	4328	2320	2180
85°	3668	2103	1973



TEST NUMBER: P332906-830

CATALOG NUMBER: S124RDIP-S575D590U830-4F0-1E-UDD-F4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.0	2.1
10°-20°	250.9	6.0
20°-30°	362.3	8.6
30°-40°	410.7	9.8
40°-50°	396.6	9.4
50°-60°	329.8	7.8
60°-70°	227.7	5.4
70°-80°	115.4	2.7
80°-90°	31.1	0.7
90°-100°	197.7	4.7
100°-110°	411.4	9.8
110°-120°	368.5	8.8
120°-130°	310.0	7.4
130°-140°	258.4	6.1
140°-150°	197.4	4.7
150°-160°	138.8	3.3
160°-170°	81.6	1.9
170°-180°	26.6	0.6
0°-30°	703.2	16.7
0°-40°	1113.9	26.5
0°-60°	1840.3	43.8
0°-90°	2214.6	52.7
90°-120°	977.6	23.2
90°-150°	1743.4	41.5
90°-180°	1990.0	47.3
0°-180°	4205.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	958	958	958	958	958	
5°	956	953	945	952	951	91
15°	911	904	886	884	879	257
25°	824	810	780	768	760	379
35°	712	688	652	628	614	445
45°	581	553	510	475	461	448
55°	440	410	363	326	311	394
65°	299	267	221	190	180	295
75°	159	132	98	81	76	168
85°	40	26	23	21	21	45
90°	1	4	10	11	11	3
95°	18	56	438	217	131	20
105°	63	91	353	760	756	67
115°	111	139	314	604	726	110
125°	154	183	313	514	580	137
135°	183	218	310	456	518	142
145°	211	242	309	385	423	133
155°	240	259	300	340	354	111
165°	262	270	288	305	309	74
175°	273	274	276	280	278	26
180°	274	274	274	274	274	



TEST NUMBER: P332906-830

CATALOG NUMBER: S124RDIP-S575D590U830-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9
2.5°	960.3	959.7	959.2	958.7	958.2	957.2	955.7	954.3	952.8	951.4	952.8
5°	956.4	955.7	955.1	954.4	953.9	952.5	950.6	948.6	946.6	944.7	946.3
7.5°	947.7	947.1	946.4	945.7	945.0	943.4	940.8	938.3	935.8	933.2	934.2
10°	939.5	938.8	937.9	937.1	936.3	934.4	931.5	928.5	925.6	922.7	923.3
12.5°	929.0	928.0	927.1	926.1	925.2	923.0	919.5	916.1	912.7	909.2	909.6
15°	911.0	909.5	908.0	906.5	905.0	902.3	898.2	894.2	890.0	886.0	885.7
17.5°	889.1	886.9	884.9	882.7	880.6	877.1	872.2	867.3	862.4	857.5	856.7
20°	872.0	870.0	867.8	865.7	863.6	859.8	854.2	848.7	843.1	837.6	836.3
22.5°	853.3	850.9	848.6	846.1	843.8	839.6	833.7	827.7	821.8	815.9	813.9
25°	823.7	820.8	817.7	814.8	811.9	807.1	800.4	793.7	787.0	780.4	777.6
27.5°	792.6	788.9	785.2	781.6	777.8	772.4	765.3	758.2	751.0	743.9	740.5
30°	770.8	766.8	762.7	758.7	754.6	748.7	741.0	733.4	725.7	718.0	714.0
32.5°	748.0	743.4	738.8	734.1	729.6	723.3	715.4	707.5	699.6	691.6	686.9
35°	712.2	707.0	701.7	696.5	691.4	684.7	676.5	668.4	660.2	652.1	646.5
37.5°	673.9	668.5	663.2	657.8	652.3	645.2	636.1	627.1	618.1	609.1	602.9
40°	646.9	641.5	636.1	630.7	625.4	618.0	608.8	599.5	590.2	580.9	574.0
42.5°	621.0	615.5	609.8	604.2	598.5	590.9	581.2	571.5	561.8	552.1	545.2
45°	580.9	574.9	568.8	562.8	556.8	548.8	539.0	529.3	519.5	509.7	501.7
47.5°	539.4	533.2	526.9	520.7	514.4	506.2	496.1	486.0	475.8	465.6	457.3
50°	511.2	504.8	498.5	492.1	485.8	477.4	466.9	456.6	446.1	435.6	427.5
52.5°	482.5	476.3	470.0	463.8	457.5	449.1	438.4	427.7	417.0	406.3	398.0
55°	440.1	433.6	427.1	420.5	414.0	405.4	394.8	384.3	373.6	363.1	354.6
57.5°	398.1	391.3	384.6	377.8	371.0	362.4	351.9	341.5	331.1	320.7	312.1
60°	368.2	361.7	355.2	348.6	342.1	333.7	323.2	312.7	302.4	291.9	283.4
62.5°	341.2	334.4	327.6	320.8	314.1	305.4	294.6	284.0	273.2	262.6	254.8
65°	299.3	292.3	285.2	278.2	271.2	262.5	252.0	241.7	231.2	220.7	213.8
67.5°	255.7	248.9	242.2	235.5	228.8	220.6	210.9	201.2	191.6	181.9	175.9
70°	228.1	221.2	214.4	207.5	200.8	192.7	183.3	174.1	164.8	155.5	150.1
72.5°	198.8	192.6	186.3	180.2	174.0	166.5	157.8	149.0	140.2	131.4	126.9
75°	159.2	153.2	147.1	141.1	135.1	128.2	120.6	112.8	105.2	97.6	93.8
77.5°	118.9	113.9	108.8	103.6	98.5	92.8	86.6	80.5	74.3	68.1	65.9
80°	93.1	88.4	83.7	79.0	74.3	69.5	64.6	59.7	54.8	49.9	49.4
82.5°	70.9	66.5	62.2	57.9	53.5	50.0	47.1	44.3	41.6	38.7	38.4
85°	39.6	36.4	33.1	29.8	26.6	24.7	24.2	23.8	23.2	22.7	22.4
87.5°	13.6	12.8	12.1	11.1	10.2	9.6	10.1	10.0	10.1	10.2	9.9
90°	0.6	1.6	3.2	3.8	4.3	4.3	7.5	7.5	8.6	9.7	9.1
92.5°	6.1	9.0	13.9	20.5	28.4	39.6	66.9	108.6	149.3	170.5	142.0
95°	17.7	19.3	24.7	31.8	44.6	67.2	114.0	202.2	330.6	438.2	450.5
97.5°	31.9	31.9	36.5	42.9	54.0	73.0	109.0	181.7	309.5	461.6	566.1
100°	40.9	40.9	44.6	51.1	61.3	78.5	110.2	171.0	280.7	432.3	570.0
102.5°	49.5	50.3	53.6	59.7	69.5	85.8	114.5	168.0	261.3	395.8	537.6
105°	62.9	64.6	67.2	73.7	83.3	99.0	124.7	169.4	244.7	352.7	479.1
107.5°	77.8	78.8	81.5	88.4	97.6	113.0	136.7	177.3	241.7	328.7	431.8
110°	87.7	88.7	91.4	97.8	107.5	122.1	145.7	183.3	242.5	320.5	408.1



TEST NUMBER: P332906-830

CATALOG NUMBER: S124RDIP-S575D590U830-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	97.1	98.2	101.3	107.4	117.0	131.5	154.3	189.8	245.1	316.6	394.7
115°	110.7	112.4	116.1	121.5	131.8	146.3	167.8	200.0	250.1	314.5	382.3
117.5°	125.0	126.5	129.8	135.7	145.2	160.3	180.8	210.5	255.2	314.0	376.7
120°	134.4	135.5	139.2	145.2	154.3	169.4	189.8	217.7	259.2	314.0	373.7
122.5°	143.0	144.1	147.9	153.4	163.3	178.0	198.4	224.6	263.1	313.6	370.2
125°	154.3	156.5	159.7	165.6	175.8	190.9	210.2	235.0	268.8	312.9	364.6
127.5°	164.3	166.1	169.9	176.6	187.3	202.5	221.2	243.9	273.4	311.7	356.9
130°	169.9	172.0	176.3	184.5	194.6	210.2	228.5	249.5	276.9	311.3	352.1
132.5°	175.5	177.2	182.9	190.5	201.5	216.2	234.5	255.1	279.9	310.9	347.9
135°	183.3	185.5	190.9	200.0	211.3	225.3	243.0	262.4	284.5	310.2	341.4
137.5°	191.2	193.2	199.2	207.8	219.6	232.9	249.5	267.6	287.1	310.1	335.8
140°	196.8	198.4	204.3	213.5	224.7	237.6	253.8	271.0	289.3	309.7	332.8
142.5°	202.8	204.4	209.9	218.6	229.5	242.0	257.7	273.5	291.0	309.7	330.3
145°	211.3	212.9	218.3	225.8	236.0	247.9	261.8	276.4	292.0	308.6	325.8
147.5°	220.8	221.4	226.1	233.8	242.4	253.1	266.2	278.8	292.5	306.7	321.9
150°	226.9	227.4	231.8	238.2	246.3	256.5	268.3	280.1	292.5	305.4	318.9
152.5°	232.5	232.6	236.9	242.9	250.2	259.5	270.0	281.0	291.6	303.2	315.4
155°	240.3	240.9	244.1	249.5	255.4	263.4	272.6	281.7	290.3	300.0	310.2
157.5°	248.0	248.0	251.0	255.1	260.3	266.6	274.5	281.7	289.0	296.7	305.0
160°	252.7	252.7	254.9	258.6	262.9	268.8	275.3	281.7	287.7	294.1	301.1
162.5°	257.0	256.6	258.3	261.6	265.5	270.1	276.2	281.7	286.3	291.5	297.7
165°	261.8	261.8	262.9	265.6	268.3	271.5	276.4	280.7	283.9	287.7	292.0
167.5°	266.6	266.2	266.6	268.7	270.2	272.7	276.3	279.4	281.3	283.8	286.8
170°	268.8	268.3	268.8	270.4	271.5	273.1	275.8	278.5	279.6	281.2	283.3
172.5°	271.0	270.4	270.5	271.7	272.4	273.5	275.4	277.7	277.9	278.6	280.3
175°	273.1	272.6	272.6	273.1	273.7	273.7	274.8	276.4	275.8	275.8	276.9
177.5°	274.1	273.7	273.2	273.7	273.7	273.7	274.1	274.9	274.1	274.1	274.6
180°	273.7	273.7	273.7	273.7	273.7	273.7	273.7	273.7	273.7	273.7	273.7



TEST NUMBER: P332906-830

CATALOG NUMBER: S124RDIP-S575D590U830-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9
2.5°	954.3	955.7	957.2	957.8	957.7	957.5	957.4	957.3
5°	947.9	949.6	951.2	951.9	951.5	951.2	950.8	950.6
7.5°	935.3	936.3	937.5	937.6	937.2	936.6	936.1	935.6
10°	924.0	924.6	925.3	925.3	924.6	924.0	923.3	922.7
12.5°	909.9	910.3	910.8	910.5	909.6	908.7	907.8	906.8
15°	885.3	885.0	884.7	884.0	882.8	881.7	880.5	879.4
17.5°	855.7	854.8	853.8	852.5	850.8	849.1	847.3	845.6
20°	835.0	833.7	832.4	830.7	828.6	826.4	824.3	822.2
22.5°	812.0	810.0	808.0	806.3	804.5	802.8	801.1	799.3
25°	774.9	772.0	769.3	767.1	765.4	763.8	762.2	760.5
27.5°	737.0	733.6	730.2	727.3	724.9	722.6	720.3	717.9
30°	709.9	705.8	701.7	698.4	695.8	693.1	690.6	688.0
32.5°	682.2	677.5	672.7	669.1	666.7	664.2	661.7	659.2
35°	640.9	635.4	629.9	625.7	622.7	619.7	616.8	613.9
37.5°	596.6	590.5	584.3	579.8	576.7	573.8	570.9	568.0
40°	567.2	560.3	553.5	548.7	545.6	542.7	539.8	536.9
42.5°	538.2	531.2	524.2	519.2	516.1	513.1	510.0	507.0
45°	493.8	485.8	477.8	472.3	469.4	466.5	463.5	460.6
47.5°	449.0	440.7	432.4	426.7	423.5	420.3	417.1	413.8
50°	419.3	411.2	403.0	397.5	394.4	391.2	388.1	385.0
52.5°	389.7	381.4	373.2	367.5	364.2	361.0	357.8	354.6
55°	346.1	337.6	329.1	323.4	320.3	317.2	314.1	310.9
57.5°	303.4	294.8	286.3	280.8	278.4	276.1	273.7	271.4
60°	274.9	266.5	258.0	252.5	249.9	247.2	244.7	242.0
62.5°	246.9	239.1	231.3	226.3	224.2	222.2	220.1	218.0
65°	206.8	199.7	192.7	188.2	186.3	184.4	182.4	180.4
67.5°	169.8	163.8	157.8	153.7	151.6	149.4	147.2	145.1
70°	144.8	139.4	133.9	130.4	128.8	127.2	125.5	123.9
72.5°	122.2	117.6	113.0	110.0	108.5	107.0	105.5	104.0
75°	90.0	86.3	82.6	80.2	79.2	78.2	77.3	76.3
77.5°	63.7	61.5	59.3	58.1	57.8	57.5	57.2	56.9
80°	48.9	48.4	47.9	47.6	47.4	47.2	47.1	46.9
82.5°	38.0	37.6	37.3	37.0	36.9	36.7	36.6	36.4
85°	22.1	21.8	21.4	21.3	21.3	21.3	21.3	21.3
87.5°	9.9	9.9	9.8	9.8	10.1	10.3	10.4	10.5
90°	9.7	10.2	10.7	10.7	11.3	11.8	11.3	11.3
92.5°	105.6	79.5	63.2	52.5	46.1	43.3	41.4	41.4
95°	398.4	315.1	243.0	190.9	164.6	147.9	138.2	131.2
97.5°	588.6	557.7	505.1	448.9	410.4	378.0	361.8	350.6
100°	648.5	659.2	632.8	593.0	546.3	513.5	497.4	493.0
102.5°	645.5	698.8	706.4	689.8	661.1	637.3	620.4	616.9
105°	602.2	695.2	748.5	770.5	771.6	767.2	759.7	756.5
107.5°	540.8	639.8	714.8	762.7	789.3	801.5	806.9	808.3
110°	503.8	596.8	674.8	734.0	772.1	794.7	804.4	809.2



TEST NUMBER: P332906-830

CATALOG NUMBER: S124RDIP-S575D590U830-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	476.7	558.9	632.6	691.7	735.1	762.4	776.0	783.8
115°	449.5	515.7	578.5	630.2	672.6	704.9	722.1	726.4
117.5°	436.1	490.9	540.4	584.1	620.4	647.4	664.9	668.3
120°	430.2	480.1	523.1	561.3	592.0	615.7	629.6	635.6
122.5°	425.0	473.3	512.4	545.8	571.7	592.0	603.8	609.7
125°	416.1	462.4	499.5	529.0	550.5	566.2	576.4	579.6
127.5°	405.4	449.6	486.6	514.6	536.3	550.2	558.7	561.9
130°	396.8	439.3	475.8	504.4	526.4	539.8	548.5	551.7
132.5°	387.8	427.6	463.4	491.8	513.5	528.7	536.8	540.1
135°	375.3	410.3	443.0	470.0	491.4	506.5	515.1	518.3
137.5°	364.0	393.6	421.2	445.5	465.6	480.5	487.6	491.4
140°	357.5	382.9	407.0	429.6	448.5	460.2	467.8	472.1
142.5°	351.6	373.8	394.5	414.2	430.7	441.8	448.5	451.4
145°	343.0	361.3	377.5	392.5	406.0	415.1	420.5	423.1
147.5°	336.0	350.5	363.4	375.3	385.2	393.0	397.1	398.1
150°	331.8	344.1	354.9	364.6	373.2	380.1	383.3	383.9
152.5°	327.0	337.6	347.5	355.5	362.8	368.5	370.4	371.0
155°	319.9	328.5	336.6	343.0	348.5	352.7	354.3	354.3
157.5°	312.3	319.5	326.2	331.4	335.5	338.7	339.7	339.7
160°	307.6	313.5	319.3	323.7	326.9	330.2	330.6	330.6
162.5°	302.8	307.8	312.5	316.4	318.8	322.0	322.5	322.1
165°	296.2	299.4	303.2	305.9	308.1	310.2	309.7	309.2
167.5°	289.9	292.4	295.4	297.0	298.1	299.4	299.4	299.0
170°	286.1	287.7	289.8	291.4	292.5	293.0	292.5	292.5
172.5°	282.6	283.8	285.1	286.3	286.9	287.5	286.9	286.1
175°	278.0	278.5	279.6	279.6	279.6	280.7	279.6	278.5
177.5°	274.9	275.4	275.4	275.8	275.4	275.8	274.9	274.1
180°	273.7	273.7	273.7	273.7	273.7	273.7	273.7	273.7

(END OF REPORT)