

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: P332257-840

Luminaire Tested: **S123RDIP-S340D805U840-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332257-840
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-S340D805U840-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 805 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4248.1 lumens
Efficiency: N/A
Efficacy: 136.2 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: Semi-Indirect

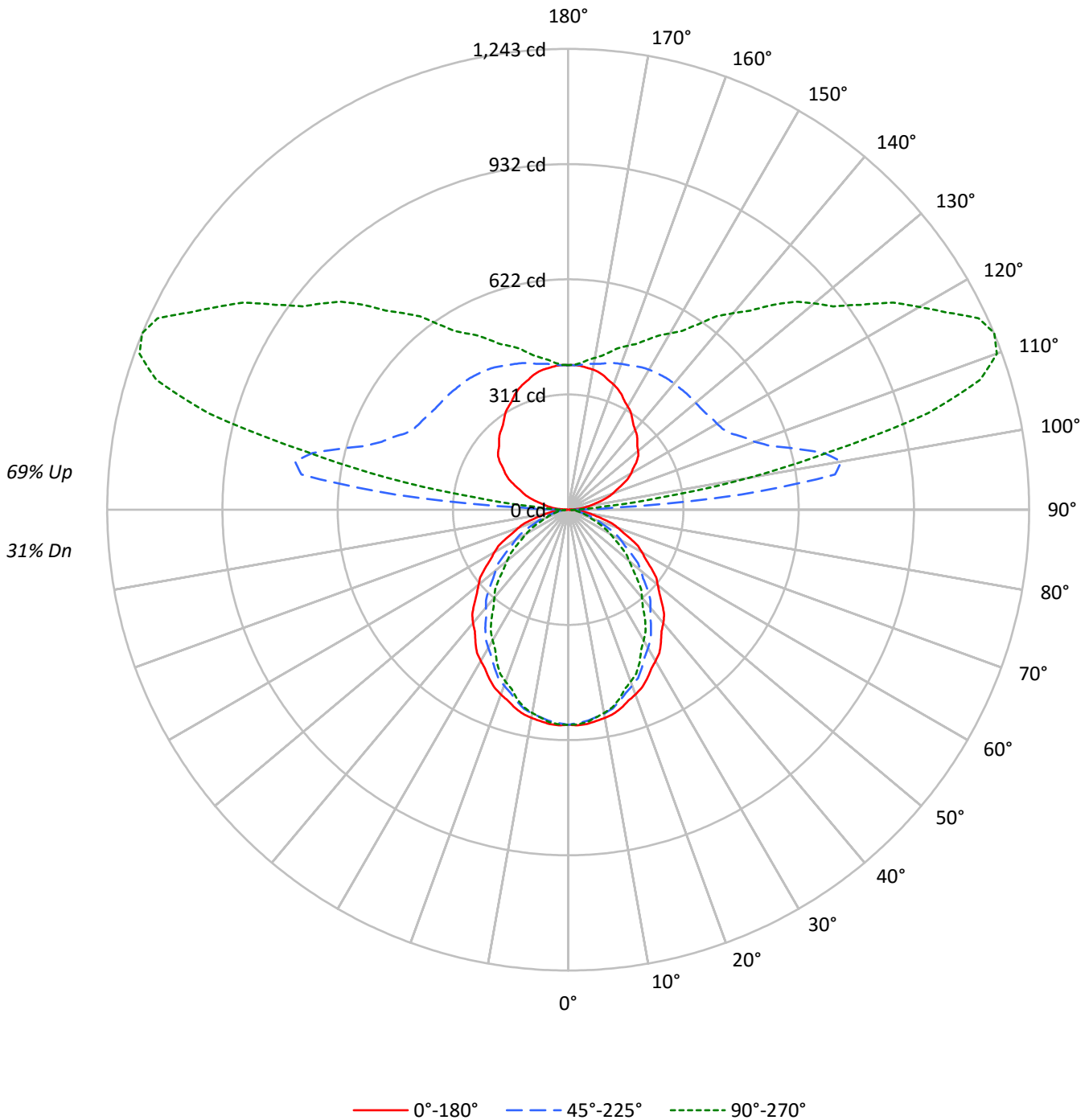
Input Watts (W): 31.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332257-840

CATALOG NUMBER: S123RDIP-S340D805U840-4F0-1E-UDD-F4

Luminous Intensity Polar Plot





TEST NUMBER: P332257-840

CATALOG NUMBER: S123RDIP-S340D805U840-4F0-1E-UDD-F4

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				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	50	30	10	0
RCR																					
0	103	103	103	103	92	92	92	92	73	73	73	55	55	55	39	39	39	39	39	39	31
1	94	90	86	83	84	81	78	75	64	62	60	49	47	46	34	34	33	33	33	33	26
2	85	78	73	68	77	71	66	62	56	53	50	43	41	39	30	29	28	28	28	28	22
3	78	69	62	56	70	62	56	52	50	46	42	38	35	33	27	25	24	24	24	24	19
4	71	61	54	48	64	55	49	44	44	40	36	34	31	28	24	22	21	21	21	21	17
5	65	54	47	41	59	49	43	38	40	35	31	30	27	25	22	20	18	18	18	18	15
6	60	49	41	35	54	44	37	33	36	31	27	28	24	21	20	18	16	16	16	16	13
7	56	44	36	31	50	40	33	29	32	27	24	25	22	19	18	16	14	14	14	14	11
8	52	40	32	27	46	36	30	25	29	24	21	23	19	17	17	15	13	13	13	13	10
9	48	36	29	24	43	33	27	22	27	22	19	21	18	15	16	13	12	12	12	12	9
10	45	33	26	22	40	30	24	20	25	20	17	19	16	14	14	12	11	11	11	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6245	6245	6245
5°	6269	6183	6218
10°	6233	6105	6084
15°	6167	5962	5899
20°	6074	5783	5648
25°	5980	5583	5404
30°	5854	5351	5059
35°	5727	5119	4742
40°	5606	4846	4350
45°	5451	4576	3997
50°	5280	4270	3600
55°	5104	3920	3232
60°	4943	3546	2827
65°	4735	3140	2420
70°	4472	2634	1954
75°	4092	2075	1838
80°	3645	1841	1692
85°	3075	1618	1507



TEST NUMBER: P332257-840

CATALOG NUMBER: S123RDIP-S340D805U840-4F0-1E-UDD-F4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.5	1.3
10°-20°	151.6	3.6
20°-30°	218.3	5.1
30°-40°	245.9	5.8
40°-50°	235.2	5.5
50°-60°	192.6	4.5
60°-70°	130.0	3.1
70°-80°	65.4	1.5
80°-90°	20.3	0.5
90°-100°	217.1	5.1
100°-110°	614.6	14.5
110°-120°	604.6	14.2
120°-130°	482.3	11.4
130°-140°	380.2	9.0
140°-150°	283.8	6.7
150°-160°	197.8	4.7
160°-170°	116.2	2.7
170°-180°	37.8	0.9
0°-30°	424.3	10.0
0°-40°	670.2	15.8
0°-60°	1098.1	25.8
0°-90°	1313.7	30.9
90°-120°	1436.3	33.8
90°-150°	2582.6	60.8
90°-180°	2934.0	69.1
0°-180°	4248.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	580	580	580	580	580	
5°	580	578	572	576	576	55
15°	553	548	535	533	529	156
25°	504	491	470	460	455	231
35°	436	418	390	370	361	273
45°	358	336	301	275	263	276
55°	272	248	209	183	172	244
65°	186	159	123	101	95	184
75°	98	76	50	45	44	105
85°	25	15	13	12	12	28
90°	2	10	20	22	23	3
95°	27	87	468	137	92	29
105°	92	135	635	1110	1004	97
115°	162	202	486	1065	1221	160
125°	225	266	453	821	963	200
135°	264	315	447	676	781	204
145°	301	345	441	555	610	189
155°	342	369	427	486	506	157
165°	373	384	409	434	441	105
175°	389	390	392	398	397	37
180°	390	390	390	390	390	



TEST NUMBER: P332257-840

CATALOG NUMBER: S123RDIP-S340D805U840-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	580.2	580.2	580.2	580.2	580.2	580.2	580.2	580.2	580.2	580.2	580.2
2.5°	582.1	581.7	581.4	581.1	580.8	580.1	579.1	578.0	577.0	576.0	576.9
5°	580.2	579.7	579.2	578.7	578.0	577.2	575.9	574.7	573.4	572.2	573.1
7.5°	574.8	574.2	573.7	573.1	572.6	571.5	569.9	568.3	566.5	564.9	565.4
10°	570.3	569.6	568.9	568.2	567.3	566.0	564.2	562.3	560.4	558.6	558.7
12.5°	563.9	563.1	562.3	561.5	560.7	559.1	556.7	554.5	552.2	549.9	549.8
15°	553.4	552.2	551.1	549.9	548.8	546.7	543.8	540.9	538.0	535.0	534.5
17.5°	540.1	538.8	537.5	536.0	534.7	532.2	528.5	524.7	521.1	517.4	516.2
20°	530.3	528.7	526.9	525.3	523.6	520.8	516.8	512.8	508.9	504.9	503.5
22.5°	519.4	517.5	515.5	513.6	511.7	508.7	504.4	500.2	495.9	491.7	490.0
25°	503.5	500.9	498.3	495.6	493.0	489.3	484.5	479.7	474.8	470.1	467.9
27.5°	484.2	481.3	478.4	475.5	472.6	468.6	463.2	457.8	452.4	447.1	444.0
30°	471.0	467.9	464.7	461.6	458.5	453.9	448.1	442.2	436.4	430.5	427.0
32.5°	457.9	454.2	450.7	447.2	443.6	438.8	432.5	426.4	420.2	413.9	410.1
35°	435.8	431.9	428.2	424.4	420.7	415.6	409.1	402.5	396.1	389.6	385.2
37.5°	413.3	409.1	405.0	400.8	396.6	391.0	384.2	377.2	370.3	363.3	358.3
40°	399.0	394.5	389.8	385.3	380.6	374.6	367.2	359.7	352.3	344.9	339.5
42.5°	382.8	378.2	373.7	369.0	364.5	358.3	350.6	343.0	335.3	327.6	321.6
45°	358.1	353.4	348.7	344.0	339.2	332.9	324.9	316.8	308.7	300.6	294.7
47.5°	333.4	328.2	323.0	317.8	312.7	306.1	298.0	289.9	282.0	273.9	267.4
50°	315.3	310.3	305.5	300.5	295.6	288.9	280.4	272.0	263.5	255.0	248.5
52.5°	299.1	293.8	288.4	283.1	277.7	270.8	262.5	254.1	245.7	237.3	230.7
55°	272.0	266.8	261.8	256.6	251.5	244.5	235.6	226.7	217.8	208.9	202.9
57.5°	246.9	241.4	235.8	230.1	224.6	217.3	208.4	199.4	190.6	181.7	175.9
60°	229.6	223.9	218.1	212.4	206.6	199.4	190.8	182.1	173.4	164.7	159.1
62.5°	212.3	206.5	200.8	195.1	189.3	182.1	173.4	164.7	156.0	147.3	142.1
65°	185.9	180.2	174.4	168.6	162.9	155.9	147.7	139.6	131.5	123.3	118.2
67.5°	159.5	153.6	147.7	142.0	136.1	129.4	121.5	113.7	105.8	98.1	94.2
70°	142.1	136.4	130.8	125.1	119.6	113.0	105.7	98.4	91.1	83.7	80.1
72.5°	124.8	119.3	113.7	108.1	102.5	96.4	89.8	83.1	76.4	69.8	66.9
75°	98.4	93.3	88.3	83.3	78.3	72.9	67.2	61.4	55.6	49.9	48.9
77.5°	74.2	69.7	65.1	60.6	56.1	52.0	48.3	44.5	40.9	37.2	36.7
80°	58.8	54.5	50.3	45.9	41.7	38.5	36.3	34.0	31.8	29.7	29.3
82.5°	44.1	40.4	36.8	33.0	29.3	27.0	26.0	24.9	23.9	22.8	22.5
85°	24.9	22.6	20.3	18.1	15.8	14.4	14.1	13.8	13.5	13.1	12.9
87.5°	9.4	8.8	8.2	7.7	7.1	7.0	7.4	7.9	8.4	8.9	8.6
90°	1.6	3.1	4.7	7.1	8.7	10.3	12.6	15.0	17.4	19.7	19.0
92.5°	9.8	14.5	21.2	27.4	33.9	45.6	66.3	100.3	133.6	121.4	91.6
95°	26.9	29.2	37.9	51.3	71.8	102.6	169.8	287.4	416.9	468.2	379.8
97.5°	45.7	46.6	53.4	65.0	85.2	118.6	182.7	315.4	531.2	725.6	776.3
100°	58.5	59.2	64.7	75.8	94.7	125.5	180.8	297.6	505.3	747.7	903.2
102.5°	71.7	73.1	78.0	88.5	105.5	133.7	183.3	282.5	467.4	706.6	909.6
105°	91.6	93.9	98.7	108.2	123.2	147.6	190.3	271.6	420.8	634.8	861.4
107.5°	112.7	115.1	119.7	129.0	143.1	165.8	203.2	270.8	391.1	571.3	777.1
110°	127.9	130.3	134.2	142.9	156.3	178.4	214.0	274.0	379.8	535.3	724.0



TEST NUMBER: P332257-840

CATALOG NUMBER: S123RDIP-S340D805U840-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	141.8	144.2	148.1	156.8	170.3	191.7	224.7	280.2	373.4	511.3	677.9
115°	161.9	165.0	169.8	177.6	191.1	212.4	242.4	290.5	371.1	485.5	622.2
117.5°	181.9	185.5	189.5	196.7	211.8	231.5	261.2	304.2	372.5	470.4	588.5
120°	195.8	198.1	202.1	210.1	225.0	244.8	273.2	314.3	375.1	463.4	570.9
122.5°	207.8	210.2	214.1	222.7	237.0	258.0	285.8	323.7	379.4	459.1	556.3
125°	225.0	226.6	231.4	240.0	255.0	276.3	304.0	338.7	386.1	453.2	537.7
127.5°	238.1	240.4	246.3	255.2	271.8	293.1	319.7	351.0	393.6	450.4	521.3
130°	246.3	248.7	255.8	265.3	281.9	303.2	329.2	359.2	398.7	448.5	512.4
132.5°	252.7	255.7	263.4	274.8	291.3	312.0	337.4	366.8	402.5	447.8	504.2
135°	263.7	266.9	275.6	287.4	304.0	325.3	349.7	376.6	408.2	446.9	493.4
137.5°	274.1	277.4	286.0	298.6	315.0	334.8	358.3	383.8	412.0	445.1	484.1
140°	281.0	285.0	293.0	305.6	321.3	341.0	364.0	387.7	414.5	444.5	478.5
142.5°	288.6	292.0	300.5	311.8	327.7	346.1	368.4	391.4	416.4	443.2	473.4
145°	300.8	303.2	310.3	322.1	335.6	353.8	374.3	395.6	417.7	441.3	466.7
147.5°	313.2	314.6	321.5	331.7	344.7	360.2	379.0	398.1	417.7	438.4	460.0
150°	321.3	322.1	328.4	338.7	349.7	364.0	382.1	398.7	417.7	435.9	455.6
152.5°	329.5	329.7	336.0	345.1	354.8	368.4	384.1	400.0	415.8	432.6	450.5
155°	341.8	341.8	346.6	354.5	363.1	374.3	387.7	400.3	413.7	427.2	442.9
157.5°	351.6	352.2	356.1	363.0	370.4	379.0	389.7	401.1	411.0	422.2	434.4
160°	359.2	359.2	362.4	368.7	374.3	382.1	391.6	401.1	409.8	418.5	428.7
162.5°	365.0	365.0	367.5	372.5	377.4	384.1	392.2	400.4	407.3	414.7	423.0
165°	373.4	372.6	374.3	378.2	381.3	386.9	393.1	398.7	403.4	409.0	415.3
167.5°	379.9	379.0	379.8	382.7	385.0	388.5	393.0	397.5	399.7	403.3	407.9
170°	383.7	382.1	382.9	385.3	386.9	388.5	392.4	395.6	397.2	399.5	403.4
172.5°	386.3	385.3	385.5	387.2	388.1	389.1	392.4	395.0	395.3	396.4	399.0
175°	389.2	388.5	387.7	389.2	389.2	390.0	391.6	393.1	392.4	392.4	393.9
177.5°	390.6	390.0	389.4	390.0	390.0	390.0	390.6	391.9	390.6	390.0	390.6
180°	390.0	390.0	390.0	390.0	390.0	390.0	390.0	390.0	390.0	390.0	390.0



TEST NUMBER: P332257-840

CATALOG NUMBER: S123RDIP-S340D805U840-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	580.2	580.2	580.2	580.2	580.2	580.2	580.2	580.2
2.5°	577.8	578.8	579.8	580.1	580.0	579.8	579.6	579.5
5°	574.1	575.0	575.9	576.3	576.1	575.9	575.7	575.5
7.5°	566.0	566.5	567.0	567.1	566.7	566.4	566.0	565.7
10°	558.8	558.9	559.0	558.8	558.3	557.7	557.1	556.6
12.5°	549.8	549.7	549.7	549.3	548.7	548.1	547.4	546.8
15°	533.9	533.4	532.9	532.3	531.6	530.8	530.1	529.4
17.5°	515.1	514.0	512.9	511.8	510.7	509.6	508.6	507.5
20°	502.2	500.8	499.5	498.2	496.9	495.6	494.4	493.1
22.5°	488.4	486.7	484.9	483.5	482.3	481.2	480.0	478.9
25°	465.6	463.5	461.3	459.6	458.5	457.4	456.2	455.0
27.5°	441.0	438.0	434.9	432.5	430.7	429.0	427.3	425.5
30°	423.4	419.9	416.4	413.7	412.0	410.4	408.7	407.0
32.5°	406.2	402.3	398.4	395.6	393.8	392.1	390.3	388.6
35°	380.6	376.1	371.6	368.4	366.6	364.7	362.7	360.9
37.5°	353.1	348.0	343.0	339.2	336.9	334.6	332.2	329.9
40°	334.1	328.6	323.2	319.2	316.8	314.5	312.0	309.6
42.5°	315.7	309.8	303.9	299.8	297.6	295.5	293.4	291.1
45°	288.7	282.8	276.8	272.6	270.1	267.6	265.1	262.6
47.5°	260.8	254.4	247.9	243.6	241.4	239.1	236.8	234.6
50°	242.1	235.6	229.1	224.7	222.3	219.8	217.4	215.0
52.5°	223.9	217.1	210.5	206.0	203.8	201.7	199.5	197.3
55°	196.8	190.8	184.7	180.6	178.5	176.4	174.3	172.2
57.5°	170.2	164.4	158.8	154.9	153.2	151.4	149.7	147.8
60°	153.4	147.7	142.1	138.4	136.6	134.8	133.1	131.3
62.5°	136.7	131.5	126.1	122.5	120.7	118.9	116.9	115.1
65°	113.0	108.0	102.8	99.7	98.5	97.4	96.2	95.0
67.5°	90.4	86.5	82.7	80.2	79.0	77.8	76.5	75.3
70°	76.4	72.8	69.1	66.8	65.5	64.4	63.2	62.1
72.5°	63.8	60.9	57.9	56.1	55.6	55.1	54.7	54.2
75°	47.8	46.8	45.6	45.0	44.8	44.6	44.4	44.2
77.5°	36.1	35.4	34.9	34.5	34.3	34.1	33.9	33.7
80°	29.0	28.7	28.4	28.2	27.9	27.7	27.5	27.3
82.5°	22.2	21.9	21.6	21.4	21.4	21.3	21.3	21.3
85°	12.7	12.5	12.3	12.2	12.2	12.2	12.2	12.2
87.5°	8.7	8.8	8.8	9.1	8.8	8.9	9.0	8.7
90°	19.7	20.5	21.3	22.9	22.1	22.9	23.7	22.9
92.5°	66.4	52.7	46.6	42.5	41.1	38.7	39.5	38.1
95°	284.3	192.7	150.8	122.4	107.3	100.3	94.7	91.6
97.5°	708.5	567.5	465.6	371.2	313.0	277.4	256.1	249.3
100°	930.9	866.9	774.6	662.4	582.7	525.0	494.2	495.0
102.5°	1004.7	1002.7	948.9	877.8	815.8	770.1	744.4	726.2
105°	1026.4	1105.3	1120.3	1099.8	1063.5	1033.5	1008.2	1004.3
107.5°	964.2	1092.4	1161.5	1189.6	1190.3	1180.2	1171.6	1164.4
110°	904.8	1050.1	1149.5	1204.9	1226.9	1233.2	1231.6	1230.1



TEST NUMBER: P332257-840

CATALOG NUMBER: S123RDIP-S340D805U840-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	846.1	994.5	1106.0	1177.0	1217.5	1237.1	1243.0	1243.3
115°	768.2	905.5	1021.7	1107.7	1166.9	1201.6	1217.5	1221.4
117.5°	711.9	830.4	934.6	1022.0	1083.7	1123.5	1146.2	1151.7
120°	682.2	788.7	883.5	963.2	1025.6	1069.9	1088.7	1093.5
122.5°	658.8	755.3	843.0	917.2	972.5	1012.3	1033.2	1039.2
125°	627.6	713.8	789.5	852.7	903.2	938.0	957.7	963.2
127.5°	600.6	677.2	745.7	803.1	848.1	877.8	895.6	900.7
130°	583.5	654.5	718.5	772.1	814.1	842.4	859.0	865.4
132.5°	567.6	633.1	692.6	743.8	783.0	811.5	826.2	830.6
135°	546.3	602.4	653.7	698.7	737.4	761.1	775.3	780.8
137.5°	526.9	572.9	617.1	656.1	688.6	712.7	724.7	728.3
140°	515.5	555.8	593.7	627.6	657.7	679.7	692.5	691.7
142.5°	504.8	539.4	572.3	601.8	627.3	646.9	658.3	657.5
145°	491.9	518.0	543.2	566.1	585.8	602.4	608.7	610.3
147.5°	481.3	502.0	522.4	538.7	553.6	564.8	570.9	571.5
150°	473.7	491.9	508.5	523.4	535.3	544.0	548.8	548.8
152.5°	466.8	482.4	497.1	509.6	518.9	526.9	529.8	529.8
155°	456.4	469.0	480.8	490.3	497.4	503.7	505.3	506.0
157.5°	445.2	455.9	465.0	472.4	478.6	483.3	484.6	484.4
160°	439.0	447.7	455.6	461.1	466.7	471.3	471.3	470.6
162.5°	431.4	438.8	446.1	451.0	454.6	458.7	458.7	458.0
165°	421.6	426.4	431.9	435.9	439.0	442.1	441.3	441.3
167.5°	413.0	416.7	419.9	422.7	424.1	426.4	425.6	425.6
170°	407.4	409.8	412.9	414.5	415.3	416.9	416.1	416.1
172.5°	402.3	404.0	406.6	407.6	407.7	409.3	407.9	407.3
175°	395.6	396.4	397.9	397.9	397.9	398.7	397.9	397.2
177.5°	391.3	391.9	392.5	392.5	391.9	392.5	391.3	391.3
180°	390.0	390.0	390.0	390.0	390.0	390.0	390.0	390.0

(END OF REPORT)