

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: P332756-840

Luminaire Tested: **S124DIW-S575D770U840-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332756-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIW-S575D770U840-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 770 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5208.3 lumens
Efficiency: N/A
Efficacy: 138.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

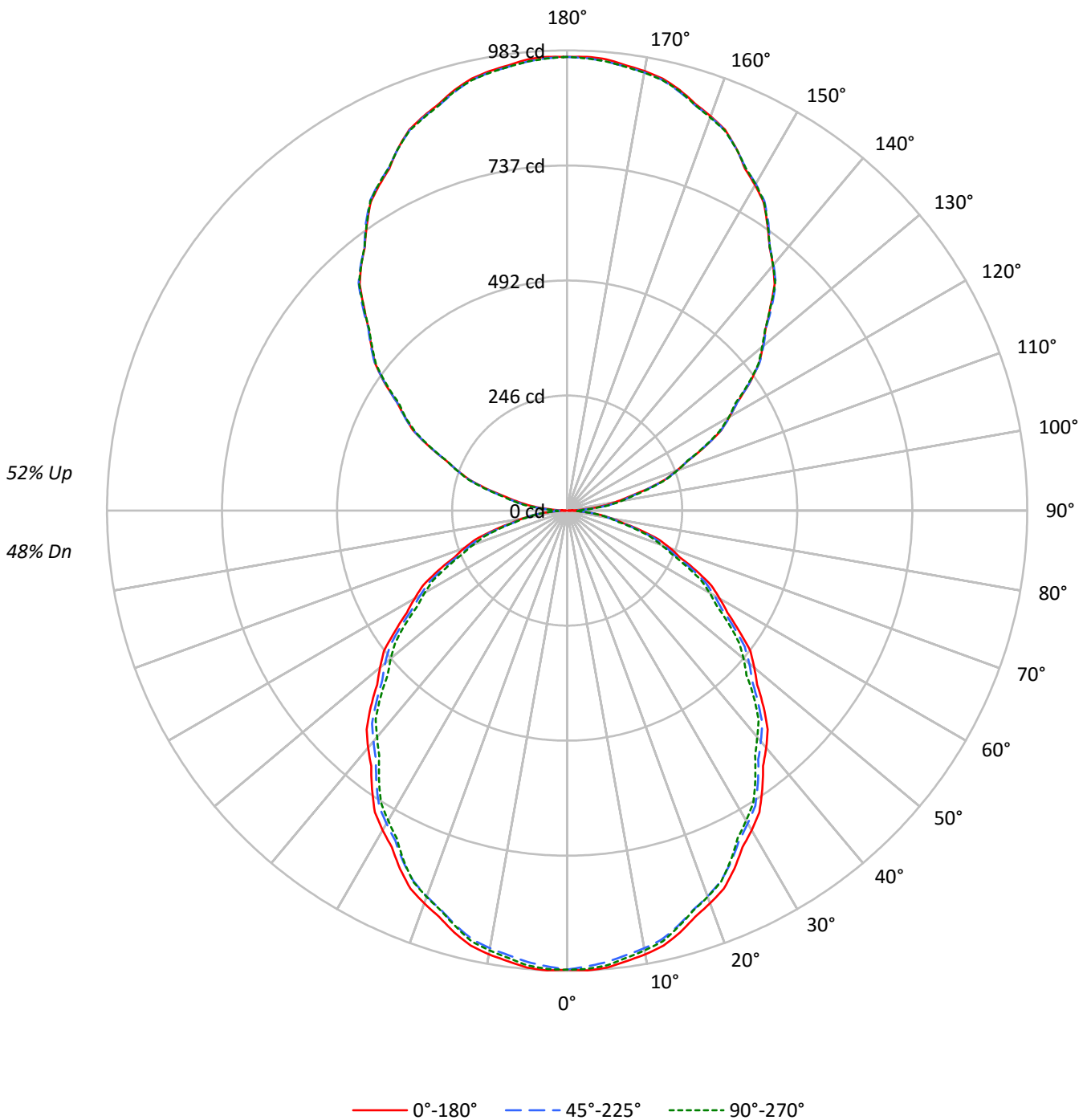
Input Watts (W): 37.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332756-840

CATALOG NUMBER: S124DIW-S575D770U840-4F0-1E-UDD-F1

Luminous Intensity Polar Plot





TEST NUMBER: P332756-840

CATALOG NUMBER: S124DIW-S575D770U840-4F0-1E-UDD-F1

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	50	30	10	50	30	10	0		
RCR																										
0	107	107	107	107	98	98	98	98	82	82	82	68	68	68	55	55	55	48					48			
1	97	93	89	86	89	86	82	79	72	70	68	60	58	56	48	47	46	41					41			
2	89	81	75	70	81	75	70	65	63	59	56	52	50	47	42	40	39	34					34			
3	81	71	64	58	74	66	60	54	56	51	47	46	43	40	38	35	33	29					29			
4	74	63	55	49	68	58	51	46	50	44	40	41	37	34	34	31	28	25					25			
5	68	56	48	42	62	52	45	40	44	39	35	37	33	30	30	27	25	21					21			
6	63	50	42	37	57	47	40	34	40	34	30	33	29	26	27	24	22	19					19			
7	58	46	38	32	53	42	35	30	36	31	27	30	26	23	25	22	19	17					17			
8	54	41	34	28	49	38	32	27	33	27	24	28	24	20	23	20	17	15					15			
9	50	38	30	25	46	35	28	24	30	25	21	26	21	18	21	18	16	14					14			
10	47	35	27	23	43	32	26	21	28	23	19	24	20	17	20	17	14	12					12			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7917	7917	7917
5°	7942	7846	7903
10°	7891	7782	7820
15°	7796	7672	7691
20°	7669	7534	7541
25°	7525	7378	7357
30°	7347	7194	7127
35°	7164	7001	6908
40°	6973	6783	6658
45°	6774	6567	6441
50°	6553	6376	6178
55°	6315	6128	5928
60°	6077	5848	5670
65°	5809	5585	5358
70°	5509	5231	5028
75°	5050	4803	4682
80°	4491	4310	4203
85°	3927	3788	3714



TEST NUMBER: P332756-840

CATALOG NUMBER: S124DIW-S575D770U840-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.4	1.8
10°-20°	260.2	5.0
20°-30°	383.0	7.4
30°-40°	445.3	8.5
40°-50°	445.3	8.5
50°-60°	389.5	7.5
60°-70°	289.3	5.6
70°-80°	164.3	3.2
80°-90°	50.3	1.0
90°-100°	63.9	1.2
100°-110°	189.3	3.6
110°-120°	321.4	6.2
120°-130°	423.8	8.1
130°-140°	475.9	9.1
140°-150°	467.7	9.0
150°-160°	393.4	7.6
160°-170°	261.7	5.0
170°-180°	91.6	1.8
0°-30°	735.6	14.1
0°-40°	1180.9	22.7
0°-60°	2015.7	38.7
0°-90°	2519.6	48.4
90°-120°	574.6	11.0
90°-150°	1942.0	37.3
90°-180°	2689.0	51.6
0°-180°	5208.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	981	981	981	981	981	
5°	980	976	968	976	975	93
15°	933	929	918	922	920	263
25°	845	839	828	829	826	388
35°	727	721	710	705	701	454
45°	593	587	575	567	564	457
55°	449	446	435	426	421	402
65°	304	300	292	285	280	301
75°	162	158	154	151	150	172
85°	42	42	41	41	40	47
90°	2	10	16	21	22	5
95°	45	52	57	59	59	50
105°	175	176	178	181	183	185
115°	327	327	325	325	324	322
125°	476	476	475	474	472	424
135°	614	618	618	617	615	475
145°	746	749	750	749	746	467
155°	854	854	854	856	854	393
165°	930	928	926	930	928	262
175°	968	964	963	968	963	92
180°	969	969	969	969	969	



TEST NUMBER: P332756-840

CATALOG NUMBER: S124DIW-S575D770U840-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	980.7	980.7	980.7	980.7	980.7	980.7	980.7	980.7	980.7	980.7	980.7
2.5°	983.2	982.8	982.4	982.0	981.6	980.6	979.1	977.5	975.9	974.4	975.8
5°	980.0	979.3	978.6	977.9	977.1	975.8	973.9	972.0	970.1	968.2	970.1
7.5°	970.8	970.1	969.5	968.8	968.1	966.6	964.5	962.4	960.2	958.1	959.7
10°	962.6	962.0	961.3	960.6	959.9	958.4	956.1	953.8	951.6	949.3	950.7
12.5°	952.0	951.3	950.6	949.9	949.2	947.7	945.2	942.8	940.4	938.0	939.5
15°	932.8	932.1	931.4	930.7	930.0	928.4	925.7	923.1	920.5	917.9	918.9
17.5°	909.7	908.8	908.0	907.1	906.2	904.5	902.0	899.6	897.1	894.6	895.2
20°	892.7	891.8	891.0	890.1	889.2	887.5	884.8	882.2	879.6	877.0	877.5
22.5°	874.4	873.3	872.2	871.0	869.9	868.0	865.4	862.7	860.1	857.5	858.5
25°	844.8	843.5	842.3	841.1	839.9	838.1	835.6	833.1	830.7	828.3	828.5
27.5°	810.8	809.6	808.3	807.1	805.8	804.1	801.7	799.5	797.2	795.0	794.6
30°	788.2	786.8	785.4	784.0	782.6	780.7	778.5	776.2	774.0	771.7	771.0
32.5°	764.3	763.1	761.7	760.5	759.3	757.4	755.1	752.7	750.2	747.8	747.0
35°	726.9	725.7	724.5	723.3	722.1	720.1	717.7	715.3	712.9	710.4	709.1
37.5°	687.4	686.3	685.2	684.1	683.0	681.2	678.5	675.9	673.3	670.7	669.3
40°	661.7	660.2	658.8	657.5	656.1	654.1	651.5	648.8	646.2	643.6	641.9
42.5°	634.0	633.2	632.4	631.5	630.7	628.7	625.9	623.0	620.1	617.2	615.2
45°	593.3	592.1	590.9	589.7	588.4	586.4	583.6	580.8	578.0	575.2	573.3
47.5°	550.7	549.9	549.1	548.2	547.3	545.6	543.1	540.5	537.9	535.3	533.1
50°	521.8	521.1	520.4	519.7	519.0	517.5	515.0	512.5	510.1	507.7	505.2
52.5°	493.5	492.7	491.8	491.0	490.2	488.5	485.8	483.3	480.7	478.1	475.9
55°	448.7	448.2	447.7	447.2	446.7	445.1	442.7	440.2	437.8	435.4	433.2
57.5°	406.0	405.4	404.8	404.1	403.5	402.1	399.7	397.3	394.9	392.4	390.4
60°	376.4	375.6	374.7	373.8	372.9	371.3	369.1	366.8	364.6	362.2	360.7
62.5°	347.5	346.8	346.0	345.3	344.6	343.0	340.6	338.2	335.8	333.4	331.9
65°	304.1	303.3	302.4	301.5	300.6	299.3	297.6	295.8	294.1	292.4	290.5
67.5°	260.4	259.6	258.8	258.0	257.2	256.0	254.3	252.7	251.0	249.2	247.6
70°	233.4	232.2	231.0	229.7	228.5	227.2	225.8	224.4	223.0	221.6	220.3
72.5°	204.5	203.3	202.1	200.8	199.5	198.4	197.3	196.2	195.1	193.9	192.8
75°	161.9	161.0	160.2	159.3	158.3	157.5	156.6	155.7	154.9	154.0	153.3
77.5°	121.2	120.8	120.4	120.1	119.7	119.1	118.3	117.5	116.7	116.0	115.7
80°	96.6	96.1	95.6	95.1	94.5	94.1	93.8	93.4	93.1	92.7	92.4
82.5°	72.8	72.5	72.3	72.0	71.8	71.6	71.6	71.5	71.4	71.4	71.1
85°	42.4	42.4	42.4	42.4	42.4	42.2	41.9	41.6	41.2	40.9	40.9
87.5°	16.8	17.1	17.3	17.5	17.7	17.9	18.0	18.2	18.3	18.4	18.6
90°	2.2	4.0	6.0	7.8	9.6	11.2	12.5	13.8	15.1	16.5	17.5
92.5°	16.1	18.2	20.2	22.3	24.4	26.0	26.9	27.8	28.8	29.7	30.3
95°	44.9	46.5	48.0	49.5	51.0	52.3	53.4	54.6	55.8	57.0	57.5
97.5°	78.6	79.8	81.0	82.1	83.3	84.6	86.0	87.4	88.8	90.1	90.7
100°	104.9	105.6	106.2	106.9	107.6	108.7	110.2	111.7	113.2	114.7	115.0
102.5°	132.5	132.8	133.0	133.3	133.6	134.4	135.7	137.1	138.5	139.9	140.4
105°	174.6	174.8	175.0	175.1	175.3	175.7	176.4	177.0	177.7	178.3	178.8
107.5°	218.8	219.0	219.2	219.4	219.6	219.8	219.9	220.0	220.2	220.3	220.7
110°	248.8	249.1	249.5	249.8	250.1	250.2	250.0	249.9	249.7	249.5	249.2



TEST NUMBER: P332756-840

CATALOG NUMBER: S124DIW-S575D770U840-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	280.0	280.0	280.1	280.2	280.2	280.1	279.8	279.5	279.2	278.9	278.9
115°	326.8	326.8	326.8	326.8	326.8	326.6	326.3	326.0	325.6	325.3	325.1
117.5°	370.8	371.0	371.1	371.2	371.4	371.3	371.1	370.9	370.6	370.4	369.8
120°	400.2	400.9	401.5	402.2	402.9	402.9	402.5	402.0	401.5	401.0	400.1
122.5°	430.8	431.1	431.3	431.6	431.9	431.9	431.7	431.4	431.2	431.0	430.4
125°	475.9	475.9	475.9	475.9	475.9	475.8	475.6	475.5	475.3	475.1	474.8
127.5°	516.8	517.4	517.9	518.4	518.9	519.0	518.7	518.5	518.2	518.0	517.6
130°	545.6	546.1	546.6	547.1	547.6	547.9	547.9	547.9	547.9	547.9	547.5
132.5°	575.0	575.4	575.7	576.1	576.5	576.6	576.4	576.3	576.2	576.0	575.7
135°	613.9	614.8	615.8	616.8	617.8	618.3	618.3	618.3	618.3	618.3	618.0
137.5°	656.1	656.6	657.0	657.5	658.0	658.3	658.6	658.8	659.1	659.4	658.9
140°	684.3	684.6	685.0	685.3	685.6	685.8	685.8	685.8	685.8	685.8	685.6
142.5°	710.0	710.4	710.7	711.0	711.4	711.6	711.3	711.2	711.1	710.9	710.9
145°	745.8	746.4	747.1	747.8	748.4	748.8	749.0	749.2	749.3	749.5	749.3
147.5°	781.1	781.9	782.7	783.6	784.4	784.7	784.6	784.4	784.3	784.2	784.0
150°	802.7	803.3	804.1	804.8	805.4	805.8	805.8	805.8	805.8	805.8	805.8
152.5°	823.1	823.5	823.9	824.4	824.8	825.0	825.1	825.3	825.4	825.5	825.9
155°	854.4	854.4	854.4	854.4	854.4	854.3	854.1	854.0	853.8	853.7	854.3
157.5°	880.8	880.5	880.2	879.9	879.6	879.5	879.4	879.4	879.4	879.3	879.8
160°	896.5	896.3	896.1	896.0	895.8	895.5	895.4	895.2	895.0	894.9	895.4
162.5°	910.8	910.4	909.9	909.5	909.1	908.8	908.6	908.5	908.3	908.1	909.0
165°	930.2	929.7	929.2	928.7	928.2	927.8	927.4	927.1	926.8	926.3	927.4
167.5°	944.9	944.3	943.6	942.9	942.2	941.8	941.9	941.9	941.9	942.0	943.0
170°	953.4	952.5	951.7	950.9	950.1	949.7	949.9	950.1	950.2	950.4	951.4
172.5°	959.4	958.7	958.0	957.3	956.5	956.2	956.2	956.3	956.3	956.3	957.6
175°	967.7	966.7	965.9	965.1	964.3	963.8	963.6	963.4	963.3	963.1	964.3
177.5°	970.3	969.7	969.0	968.4	967.7	967.3	967.3	967.3	967.3	967.3	968.3
180°	969.1	969.1	969.1	969.1	969.1	969.1	969.1	969.1	969.1	969.1	969.1



TEST NUMBER: P332756-840

CATALOG NUMBER: S124DIW-S575D770U840-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	980.7	980.7	980.7	980.7	980.7	980.7	980.7	980.7
2.5°	977.2	978.7	980.1	980.7	980.5	980.4	980.3	980.1
5°	972.0	973.9	975.8	976.6	976.2	975.9	975.5	975.2
7.5°	961.2	962.7	964.2	964.9	964.7	964.5	964.3	964.0
10°	952.1	953.5	954.9	955.4	955.0	954.7	954.3	954.0
12.5°	941.1	942.6	944.1	944.6	944.1	943.6	943.2	942.7
15°	920.0	921.0	922.0	922.3	921.8	921.3	920.7	920.2
17.5°	896.0	896.6	897.3	897.4	897.1	896.7	896.4	896.1
20°	878.1	878.6	879.1	879.2	878.8	878.5	878.2	877.8
22.5°	859.4	860.3	861.3	861.4	860.8	860.2	859.6	858.9
25°	828.6	828.8	829.0	828.7	828.0	827.3	826.6	825.9
27.5°	794.2	793.7	793.2	792.6	791.7	790.9	790.0	789.1
30°	770.3	769.6	768.9	768.1	767.2	766.4	765.5	764.6
32.5°	746.1	745.3	744.5	743.6	742.8	741.8	740.9	740.1
35°	707.9	706.7	705.5	704.5	703.6	702.7	701.9	700.9
37.5°	668.0	666.6	665.3	664.1	663.0	661.8	660.7	659.4
40°	640.2	638.3	636.6	635.3	634.4	633.6	632.7	631.8
42.5°	613.2	611.1	609.0	607.7	607.2	606.6	606.0	605.4
45°	571.4	569.5	567.5	566.3	565.8	565.3	564.7	564.2
47.5°	531.0	528.8	526.6	524.9	523.6	522.2	520.9	519.6
50°	502.7	500.3	497.9	496.1	495.0	494.0	493.0	491.9
52.5°	473.7	471.6	469.5	467.7	466.4	465.0	463.7	462.4
55°	431.2	429.1	427.0	425.4	424.3	423.3	422.2	421.2
57.5°	388.5	386.5	384.5	382.9	381.9	380.9	379.9	378.9
60°	359.1	357.6	356.0	354.8	353.9	353.0	352.1	351.2
62.5°	330.5	329.0	327.6	326.5	325.6	324.8	323.9	323.0
65°	288.8	287.1	285.4	284.1	283.2	282.3	281.4	280.5
67.5°	245.9	244.3	242.6	241.6	241.4	241.2	240.9	240.7
70°	218.8	217.4	216.0	215.1	214.5	214.0	213.5	213.0
72.5°	191.7	190.6	189.5	188.6	188.1	187.6	187.1	186.5
75°	152.6	151.9	151.3	150.8	150.6	150.5	150.3	150.1
77.5°	115.5	115.3	115.1	114.8	114.3	113.9	113.4	113.0
80°	92.0	91.7	91.3	91.1	90.9	90.7	90.6	90.4
82.5°	70.9	70.7	70.5	70.3	70.2	70.0	69.8	69.6
85°	40.9	40.9	40.9	40.8	40.6	40.4	40.3	40.1
87.5°	18.8	19.0	19.2	19.3	19.4	19.5	19.5	19.6
90°	18.5	19.5	20.5	21.1	21.5	21.8	22.1	22.5
92.5°	30.9	31.5	32.1	32.5	32.7	32.9	33.1	33.3
95°	58.0	58.5	59.0	59.2	59.2	59.2	59.2	59.2
97.5°	91.3	91.9	92.5	92.8	92.8	92.8	92.8	92.8
100°	115.3	115.6	116.0	116.1	116.1	116.1	116.1	116.1
102.5°	140.8	141.3	141.7	142.0	142.2	142.3	142.4	142.6
105°	179.4	179.9	180.4	180.9	181.4	181.9	182.4	182.9
107.5°	221.2	221.6	222.1	222.3	222.3	222.3	222.2	222.2
110°	248.9	248.6	248.2	248.3	248.8	249.3	249.8	250.3



TEST NUMBER: P332756-840

CATALOG NUMBER: S124DIW-S575D770U840-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	278.8	278.7	278.7	278.7	278.8	278.9	279.0	279.1
115°	325.0	324.8	324.6	324.5	324.3	324.2	324.0	323.8
117.5°	369.3	368.7	368.1	367.7	367.4	367.0	366.7	366.4
120°	399.3	398.5	397.7	397.4	397.8	398.1	398.4	398.7
122.5°	429.8	429.3	428.7	428.1	427.5	426.9	426.4	425.8
125°	474.5	474.2	473.8	473.5	473.2	472.8	472.5	472.2
127.5°	517.3	516.9	516.5	516.2	516.0	515.7	515.4	515.2
130°	547.2	546.8	546.5	546.0	545.4	544.7	544.0	543.4
132.5°	575.4	575.1	574.7	574.4	574.2	573.9	573.6	573.4
135°	617.6	617.3	617.0	616.6	616.1	615.6	615.1	614.6
137.5°	658.5	658.1	657.7	657.5	657.6	657.7	657.8	657.9
140°	685.5	685.3	685.1	685.0	684.8	684.6	684.5	684.3
142.5°	710.9	710.8	710.8	710.8	710.7	710.7	710.7	710.6
145°	749.2	749.0	748.8	748.5	748.0	747.5	747.0	746.5
147.5°	783.9	783.8	783.6	783.5	783.3	783.2	782.9	782.7
150°	805.8	805.8	805.8	805.7	805.5	805.3	805.2	805.0
152.5°	826.3	826.7	827.1	827.1	826.7	826.3	825.8	825.4
155°	855.1	855.7	856.4	856.4	855.7	855.1	854.3	853.7
157.5°	880.3	880.8	881.3	881.3	880.7	880.2	879.6	879.0
160°	896.0	896.5	897.0	896.8	896.0	895.0	894.2	893.4
162.5°	909.9	910.8	911.7	911.7	910.9	910.1	909.3	908.4
165°	928.4	929.4	930.4	930.6	929.9	929.2	928.6	927.9
167.5°	944.0	944.9	945.9	945.9	944.9	943.9	942.9	941.8
170°	952.4	953.4	954.4	954.3	953.1	952.0	950.8	949.7
172.5°	958.7	959.8	960.9	960.9	959.7	958.6	957.4	956.2
175°	965.4	966.6	967.8	967.8	966.6	965.4	964.3	963.1
177.5°	969.2	970.1	971.1	971.0	969.9	968.9	967.8	966.7
180°	969.1	969.1	969.1	969.1	969.1	969.1	969.1	969.1

(END OF REPORT)