

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: P332152

Luminaire Tested: **S123DIW-S775D460U835-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332152  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123DIW-S775D460U835-4F0-1E-UDD-D  
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 460 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

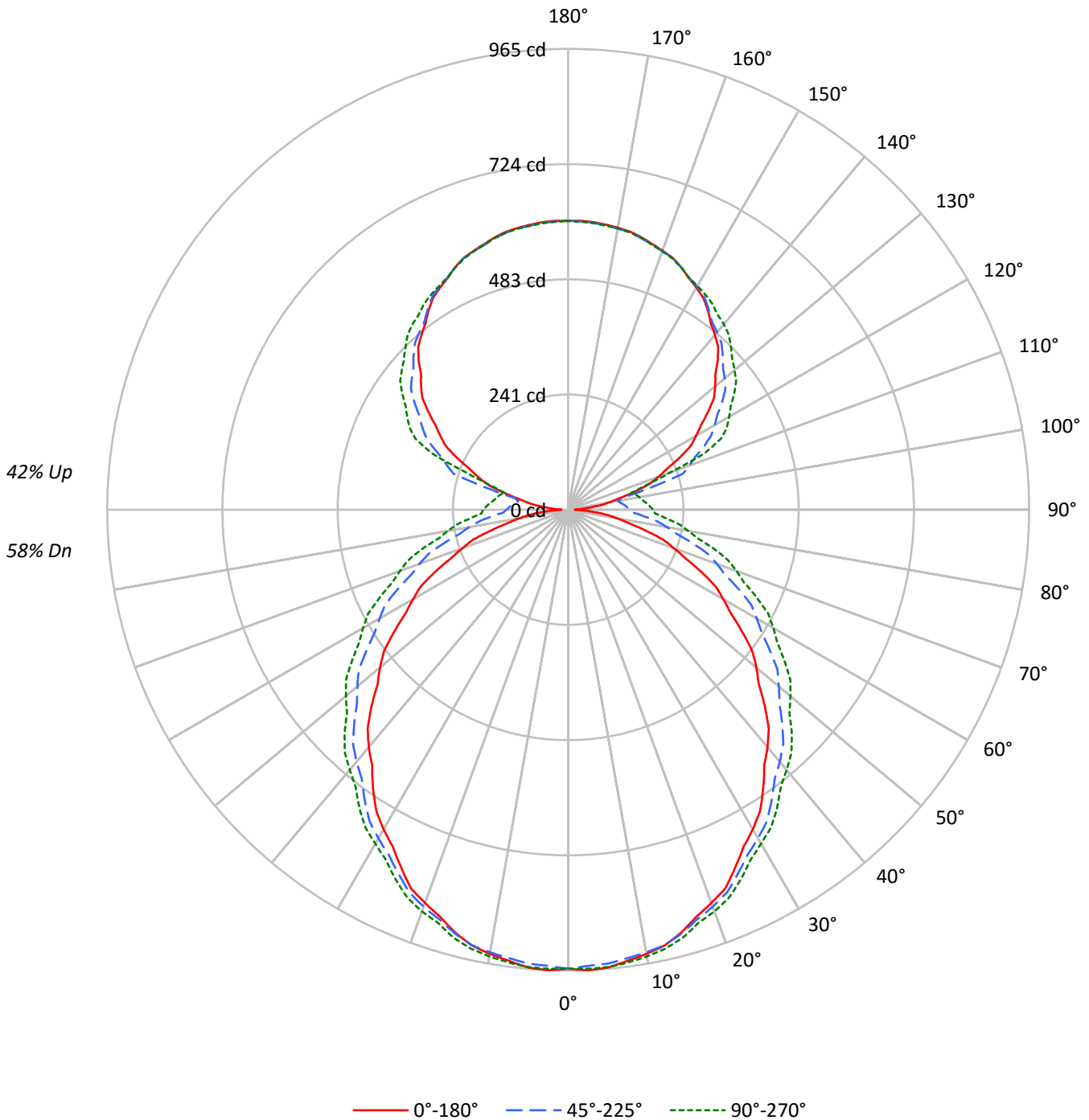
Lumens per Lamp: N/A  
Luminaire Lumens: 5075.9 lumens  
Efficiency: N/A  
Efficacy: 134.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

Input Watts (W): 37.7  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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



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### 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	50	30	10	0	
RCR																						
0	109	109	109	109	102	102	102	102	88	88	88	75	75	75	64	64	64	58				
1	98	93	89	85	91	87	83	80	75	72	70	64	62	60	54	53	51	47				
2	89	81	74	69	83	76	70	65	65	61	57	56	52	49	47	45	42	38				
3	81	71	63	57	75	66	59	53	57	52	47	49	45	41	41	38	36	32				
4	74	62	54	48	68	58	51	45	51	45	40	43	39	35	37	33	30	27				
5	68	56	47	41	63	52	44	38	45	39	34	39	34	30	33	29	26	23				
6	62	50	41	35	58	47	39	33	41	34	30	35	30	26	30	26	23	20				
7	58	45	37	31	54	42	35	29	37	31	26	32	27	23	27	23	20	18				
8	54	41	33	27	50	38	31	26	34	28	23	29	24	21	25	21	18	16				
9	50	37	29	24	46	35	28	23	31	25	21	27	22	19	23	19	16	14				
10	47	34	27	22	43	32	25	21	28	23	19	25	20	17	21	18	15	13				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	10346	10346	10346
5°	10379	10086	10092
10°	10286	9853	9804
15°	10153	9590	9490
20°	9963	9288	9146
25°	9730	8942	8782
30°	9490	8630	8415
35°	9221	8300	8121
40°	8965	8000	7807
45°	8682	7712	7556
50°	8400	7427	7278
55°	8091	7135	7030
60°	7790	6839	6774
65°	7480	6524	6470
70°	7013	6169	6159
75°	6425	5763	5842
80°	5749	5363	5479
85°	5117	5090	5269



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	91.1	1.8
10°-20°	259.8	5.1
20°-30°	388.5	7.7
30°-40°	464.0	9.1
40°-50°	485.4	9.6
50°-60°	455.5	9.0
60°-70°	380.5	7.5
70°-80°	272.2	5.4
80°-90°	164.0	3.2
90°-100°	123.8	2.4
100°-110°	179.6	3.5
110°-120°	301.7	5.9
120°-130°	349.1	6.9
130°-140°	355.3	7.0
140°-150°	323.0	6.4
150°-160°	258.3	5.1
160°-170°	166.7	3.3
170°-180°	57.5	1.1
0°-30°	739.4	14.6
0°-40°	1203.3	23.7
0°-60°	2144.3	42.2
0°-90°	2961.0	58.3
90°-120°	605.1	11.9
90°-150°	1632.5	32.2
90°-180°	2115.0	41.7
0°-180°	5075.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	961	961	961	961	961	
5°	962	960	954	962	961	91
15°	916	919	918	928	928	258
25°	827	837	841	854	854	381
35°	712	729	742	757	762	445
45°	582	607	634	653	662	449
55°	444	479	516	543	553	397
65°	307	348	394	424	436	303
75°	166	216	268	301	315	178
85°	51	104	159	193	205	54
90°	14	70	129	165	178	11
95°	39	63	118	152	164	43
105°	142	171	177	130	137	150
115°	256	273	313	342	353	253
125°	357	362	393	415	424	319
135°	443	445	458	477	482	341
145°	510	512	513	522	526	319
155°	560	559	560	562	559	258
165°	591	590	589	592	590	167
175°	605	603	603	606	602	58
180°	605	605	605	605	605	



TEST NUMBER: P332152

CATALOG NUMBER: S123DIW-S775D460U835-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2
2.5°	965.4	964.8	964.3	963.7	963.2	962.1	960.7	959.2	957.7	956.2	957.7
5°	962.3	961.8	961.3	960.9	960.4	959.5	958.1	956.7	955.3	953.9	955.8
7.5°	952.8	952.9	953.0	953.1	953.2	952.6	951.2	949.9	948.5	947.2	949.5
10°	944.5	944.9	945.4	945.9	946.3	946.0	944.8	943.7	942.5	941.3	943.7
12.5°	934.4	935.1	935.7	936.4	937.0	937.0	936.2	935.4	934.6	933.8	935.9
15°	916.2	916.9	917.6	918.3	919.0	919.2	919.0	918.8	918.5	918.3	920.6
17.5°	893.2	894.6	896.0	897.3	898.7	899.4	899.3	899.2	899.1	899.0	901.1
20°	876.4	877.8	879.2	880.6	882.0	882.9	883.4	883.9	884.3	884.8	886.9
22.5°	858.8	860.2	861.6	863.0	864.4	865.4	866.1	866.7	867.4	868.0	870.7
25°	827.2	829.5	831.8	834.2	836.5	838.0	838.7	839.4	840.1	840.8	843.8
27.5°	795.4	798.0	800.7	803.3	806.0	808.0	809.5	811.0	812.5	814.0	816.6
30°	772.7	775.8	778.8	781.8	784.8	787.3	789.1	791.0	792.9	794.7	797.5
32.5°	747.6	751.0	754.4	757.8	761.2	764.1	766.5	769.0	771.4	773.8	776.8
35°	712.0	715.7	719.5	723.2	726.9	730.3	733.3	736.3	739.4	742.4	745.9
37.5°	674.3	678.5	682.7	686.9	691.1	695.0	698.8	702.5	706.2	709.9	713.9
40°	649.2	653.4	657.6	661.8	665.9	670.4	675.0	679.7	684.3	689.0	692.9
42.5°	621.5	626.7	631.8	636.9	642.0	647.0	651.8	656.7	661.5	666.4	670.7
45°	582.2	587.8	593.3	598.9	604.5	610.2	616.0	621.8	627.7	633.5	637.9
47.5°	540.9	547.3	553.6	559.9	566.2	572.7	579.4	586.0	592.7	599.3	604.3
50°	514.1	520.6	527.1	533.7	540.2	547.0	554.3	561.5	568.7	575.9	581.2
52.5°	485.6	492.5	499.4	506.3	513.2	520.6	528.6	536.5	544.5	552.4	558.0
55°	444.0	451.6	459.3	467.0	474.7	482.7	491.1	499.5	507.8	516.2	522.5
57.5°	403.3	411.3	419.3	427.3	435.4	443.9	453.1	462.3	471.4	480.6	486.9
60°	374.9	383.2	391.6	400.0	408.4	417.3	426.9	436.4	445.9	455.5	462.0
62.5°	348.0	356.6	365.2	373.7	382.3	391.6	401.7	411.8	421.9	432.0	438.5
65°	306.8	315.9	324.9	334.0	343.1	352.7	363.0	373.2	383.5	393.7	400.7
67.5°	264.9	274.5	284.2	293.8	303.4	313.5	323.9	334.3	344.7	355.2	362.8
70°	235.6	245.6	255.6	265.6	275.6	286.2	297.4	308.5	319.7	330.9	338.3
72.5°	208.8	218.8	228.8	238.8	248.8	259.6	271.1	282.7	294.2	305.7	313.4
75°	166.5	177.4	188.4	199.3	210.2	221.5	233.1	244.8	256.4	268.1	275.7
77.5°	129.6	140.7	151.7	162.7	173.7	185.1	196.9	208.6	220.3	232.0	240.1
80°	103.7	115.1	126.5	137.9	149.3	161.0	173.1	185.2	197.3	209.4	217.3
82.5°	81.0	92.6	104.2	115.8	127.4	139.3	151.6	163.9	176.2	188.5	196.4
85°	51.3	62.9	74.6	86.2	97.8	109.8	122.2	134.5	146.8	159.2	167.1
87.5°	27.9	39.7	51.5	63.3	75.1	87.0	99.2	111.3	123.4	135.6	143.5
90°	14.1	26.5	38.9	51.3	63.7	76.4	89.6	102.8	115.9	129.1	137.4
92.5°	21.1	31.1	41.1	51.1	61.2	72.5	85.1	97.8	110.5	123.1	131.5
95°	38.9	43.9	48.9	53.9	58.8	67.6	80.1	92.6	105.1	117.6	125.5
97.5°	65.3	71.7	78.0	84.4	90.8	95.8	99.5	103.2	106.9	110.6	118.3
100°	85.4	94.8	104.2	113.7	123.1	125.4	120.5	115.7	110.8	105.9	113.5
102.5°	108.2	116.4	124.5	132.7	140.8	141.6	135.1	128.6	122.1	115.6	119.7
105°	142.3	148.9	155.6	162.3	169.0	172.8	173.9	174.9	175.9	176.9	165.8
107.5°	177.1	182.8	188.4	194.0	199.6	207.9	218.8	229.7	240.6	251.5	244.8
110°	200.4	205.4	210.3	215.3	220.3	228.0	238.4	248.8	259.2	269.6	272.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	223.4	227.5	231.7	235.9	240.0	247.1	257.2	267.2	277.2	287.3	293.2
115°	256.4	259.8	263.2	266.6	269.9	276.3	285.6	294.8	304.1	313.4	320.0
117.5°	289.1	291.6	294.1	296.5	299.0	304.4	312.7	321.0	329.4	337.7	344.0
120°	308.8	310.9	312.9	315.0	317.0	322.1	330.0	338.0	346.0	354.0	360.1
122.5°	329.6	331.0	332.3	333.7	335.0	339.5	347.2	354.9	362.6	370.3	376.0
125°	357.2	358.0	358.8	359.6	360.4	364.3	371.5	378.6	385.8	392.9	398.0
127.5°	384.8	385.4	386.0	386.5	387.1	390.4	396.5	402.6	408.6	414.7	419.6
130°	402.1	402.7	403.2	403.8	404.4	407.2	412.2	417.3	422.3	427.4	432.2
132.5°	417.8	418.5	419.3	420.1	420.8	423.2	427.2	431.3	435.3	439.4	444.0
135°	442.8	443.2	443.6	443.9	444.3	446.0	448.9	451.9	454.8	457.8	462.3
137.5°	464.2	464.8	465.3	465.9	466.5	467.6	469.3	470.9	472.6	474.2	478.4
140°	477.7	478.3	478.9	479.5	480.1	480.9	481.9	482.9	483.9	484.9	488.8
142.5°	491.0	491.4	491.9	492.3	492.7	493.1	493.5	494.0	494.4	494.9	498.3
145°	509.6	510.1	510.6	511.0	511.5	511.8	512.0	512.2	512.4	512.6	514.7
147.5°	526.1	526.6	527.0	527.5	527.9	528.3	528.5	528.7	528.9	529.1	529.8
150°	536.9	537.2	537.5	537.8	538.1	538.3	538.5	538.7	538.9	539.1	539.3
152.5°	546.6	546.7	546.9	547.0	547.2	547.3	547.4	547.5	547.6	547.8	548.1
155°	560.2	560.0	559.8	559.7	559.5	559.4	559.5	559.6	559.7	559.8	560.3
157.5°	570.9	570.8	570.8	570.8	570.8	570.7	570.6	570.5	570.4	570.3	570.9
160°	577.3	577.2	577.1	577.0	576.9	576.8	576.7	576.6	576.5	576.4	577.0
162.5°	583.4	583.2	582.9	582.7	582.4	582.2	582.1	582.0	581.9	581.8	582.5
165°	590.8	590.5	590.2	589.9	589.6	589.4	589.3	589.2	589.1	589.0	589.8
167.5°	596.6	596.2	595.8	595.4	595.0	594.8	594.8	594.8	594.8	594.8	595.6
170°	599.8	599.4	599.0	598.6	598.2	598.0	598.0	598.0	598.0	598.0	598.8
172.5°	601.9	601.5	601.0	600.5	600.0	599.8	599.9	600.0	600.1	600.1	600.9
175°	604.7	604.2	603.7	603.2	602.7	602.5	602.6	602.7	602.8	602.9	603.6
177.5°	605.4	605.0	604.6	604.2	603.8	603.7	603.8	603.8	603.9	604.0	604.6
180°	604.7	604.7	604.7	604.7	604.7	604.7	604.7	604.7	604.7	604.7	604.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2
2.5°	959.2	960.7	962.1	962.8	962.6	962.4	962.2	962.1
5°	957.6	959.5	961.3	962.1	961.9	961.7	961.5	961.2
7.5°	951.8	954.2	956.5	957.5	957.2	957.0	956.7	956.4
10°	946.0	948.3	950.6	951.6	951.1	950.6	950.2	949.7
12.5°	938.1	940.2	942.3	943.2	942.7	942.3	941.8	941.3
15°	922.9	925.3	927.6	928.6	928.4	928.2	927.9	927.7
17.5°	903.2	905.3	907.4	908.3	908.0	907.6	907.3	907.0
20°	889.0	891.1	893.2	894.3	894.6	894.8	895.0	895.3
22.5°	873.3	876.0	878.6	879.9	879.8	879.6	879.5	879.3
25°	846.9	849.9	852.9	854.4	854.4	854.4	854.4	854.4
27.5°	819.2	821.8	824.4	825.8	826.0	826.2	826.4	826.6
30°	800.3	803.1	805.9	807.3	807.3	807.3	807.3	807.3
32.5°	779.7	782.7	785.7	787.5	788.0	788.6	789.1	789.7
35°	749.4	752.9	756.3	758.6	759.5	760.4	761.3	762.3
37.5°	717.8	721.8	725.7	728.1	728.8	729.6	730.3	731.1
40°	696.9	700.8	704.8	707.2	708.2	709.1	710.0	711.0
42.5°	675.0	679.3	683.7	686.5	687.8	689.1	690.4	691.7
45°	642.3	646.7	651.2	654.3	656.2	658.0	659.9	661.8
47.5°	609.3	614.3	619.3	622.5	623.9	625.4	626.8	628.2
50°	586.6	591.9	597.3	600.8	602.4	604.0	605.7	607.3
52.5°	563.5	569.1	574.6	578.4	580.4	582.4	584.4	586.4
55°	528.8	535.1	541.3	545.4	547.3	549.1	551.0	552.9
57.5°	493.3	499.6	505.9	510.2	512.4	514.6	516.7	518.9
60°	468.5	475.0	481.5	486.1	488.6	491.2	493.8	496.3
62.5°	445.1	451.6	458.1	462.5	464.9	467.3	469.7	472.0
65°	407.7	414.6	421.6	426.3	428.6	430.9	433.3	435.6
67.5°	370.4	378.1	385.7	390.5	392.4	394.4	396.4	398.3
70°	345.8	353.2	360.7	365.5	367.9	370.2	372.5	374.9
72.5°	321.0	328.6	336.3	341.3	343.6	345.9	348.2	350.6
75°	283.4	291.1	298.8	304.0	306.8	309.6	312.4	315.2
77.5°	248.2	256.3	264.4	269.5	271.7	273.8	276.0	278.1
80°	225.2	233.1	241.1	246.2	248.5	250.8	253.2	255.5
82.5°	204.3	212.2	220.1	225.2	227.6	229.9	232.2	234.5
85°	175.0	182.9	190.8	195.9	198.2	200.6	202.9	205.2
87.5°	151.5	159.5	167.5	172.7	175.1	177.4	179.8	182.2
90°	145.7	154.0	162.3	167.8	170.3	172.8	175.3	177.9
92.5°	139.8	148.2	156.6	161.9	164.1	166.4	168.7	170.9
95°	133.4	141.3	149.2	154.4	156.7	159.0	161.3	163.7
97.5°	126.1	133.8	141.5	146.6	149.0	151.5	153.9	156.3
100°	121.0	128.6	136.1	141.1	143.5	145.9	148.4	150.8
102.5°	123.8	127.9	132.0	135.3	137.8	140.3	142.8	145.3
105°	154.6	143.5	132.3	127.9	130.2	132.5	134.7	137.0
107.5°	238.1	231.4	224.6	215.7	204.4	193.1	181.8	170.6
110°	275.1	277.9	280.7	275.8	263.4	251.0	238.6	226.2





TEST NUMBER: P332152

CATALOG NUMBER: S123DIW-S775D460U835-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	299.1	305.0	310.9	313.4	312.5	311.5	310.5	309.6
115°	326.5	333.1	339.7	344.1	346.4	348.7	350.9	353.2
117.5°	350.4	356.7	363.0	367.1	369.0	370.9	372.8	374.7
120°	366.3	372.4	378.6	382.5	384.1	385.7	387.4	389.0
122.5°	381.7	387.5	393.2	396.9	398.6	400.3	402.0	403.7
125°	403.1	408.2	413.3	416.7	418.6	420.4	422.2	424.0
127.5°	424.5	429.5	434.4	437.5	438.9	440.3	441.7	443.1
130°	437.0	441.8	446.7	449.7	450.9	452.1	453.3	454.5
132.5°	448.6	453.3	457.9	460.9	462.2	463.5	464.8	466.1
135°	466.8	471.3	475.8	478.4	479.3	480.2	481.0	481.9
137.5°	482.6	486.7	490.9	493.4	494.4	495.4	496.3	497.3
140°	492.7	496.6	500.5	502.9	503.9	504.8	505.8	506.8
142.5°	501.7	505.2	508.6	510.8	511.7	512.5	513.4	514.3
145°	516.7	518.8	520.9	522.4	523.3	524.2	525.2	526.1
147.5°	530.6	531.3	532.1	532.7	533.0	533.4	533.8	534.2
150°	539.5	539.7	539.9	540.1	540.3	540.4	540.6	540.8
152.5°	548.5	548.8	549.2	549.2	548.8	548.5	548.1	547.7
155°	560.8	561.3	561.8	561.7	561.1	560.5	559.9	559.4
157.5°	571.5	572.1	572.7	572.6	571.8	571.1	570.3	569.5
160°	577.6	578.2	578.8	578.8	578.1	577.4	576.7	576.0
162.5°	583.2	583.9	584.5	584.6	583.9	583.3	582.7	582.1
165°	590.6	591.4	592.2	592.2	591.5	590.9	590.2	589.5
167.5°	596.4	597.1	597.9	597.9	597.1	596.4	595.6	594.8
170°	599.6	600.4	601.2	601.2	600.4	599.6	598.8	598.0
172.5°	601.7	602.5	603.3	603.3	602.4	601.5	600.7	599.8
175°	604.3	605.0	605.7	605.7	604.9	604.1	603.3	602.5
177.5°	605.3	605.9	606.6	606.5	605.7	604.9	604.1	603.3
180°	604.7	604.7	604.7	604.7	604.7	604.7	604.7	604.7

(END OF REPORT)