

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: P331958

Luminaire Tested: **S123DIP-S775D365U835-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331958
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: S123DIP-S775D365U835-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

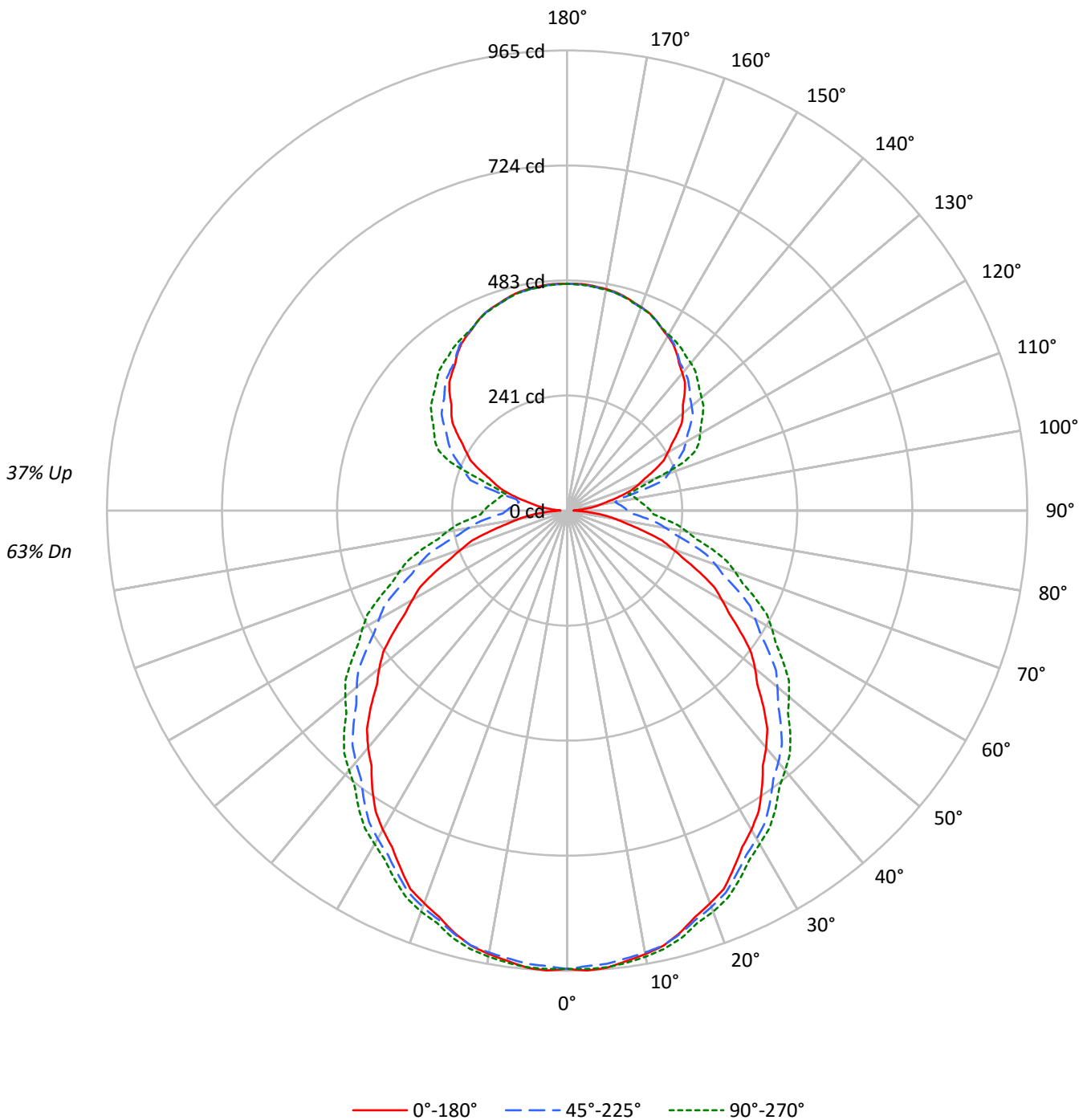
Lumens per Lamp: N/A
Luminaire Lumens: 4681.9 lumens
Efficiency: N/A
Efficacy: 133.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: Semi-Direct

Input Watts (W): 35
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: P331958
CATALOG NUMBER: S123DIP-S775D365U835-4F0-1E-UDD-D

Luminous Intensity Polar Plot





TEST NUMBER: P331958

CATALOG NUMBER: S123DIP-S775D365U835-4F0-1E-UDD-D

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	110	110	110	110	103	103	103	103	91	91	91	79	79	79	68	68	68	63
1	99	94	90	86	93	89	85	81	78	75	72	68	65	63	58	57	55	50
2	90	82	75	69	84	77	71	65	67	63	58	59	55	52	51	48	45	41
3	82	71	63	57	76	67	60	54	59	53	49	51	47	43	44	41	38	34
4	75	63	54	48	70	59	52	46	52	46	41	46	41	37	39	36	32	29
5	69	56	47	41	64	53	45	39	47	40	35	41	36	32	35	31	28	25
6	63	50	42	35	59	47	40	34	42	35	31	37	32	28	32	28	25	22
7	58	45	37	31	54	43	35	30	38	32	27	33	28	24	29	25	22	19
8	54	41	33	27	51	39	31	26	35	28	24	31	25	22	27	23	19	17
9	50	38	30	24	47	36	28	23	32	26	21	28	23	19	25	21	18	15
10	47	35	27	22	44	33	26	21	29	23	19	26	21	18	23	19	16	14

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



TEST NUMBER: P331958

CATALOG NUMBER: S123DIP-S775D365U835-4F0-1E-UDD-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.1	1.9
10°-20°	259.8	5.5
20°-30°	388.5	8.3
30°-40°	464.0	9.9
40°-50°	485.4	10.4
50°-60°	455.5	9.7
60°-70°	380.5	8.1
70°-80°	272.2	5.8
80°-90°	163.7	3.5
90°-100°	119.1	2.5
100°-110°	157.3	3.4
110°-120°	248.0	5.3
120°-130°	280.6	6.0
130°-140°	282.2	6.0
140°-150°	254.6	5.4
150°-160°	203.2	4.3
160°-170°	131.1	2.8
170°-180°	45.2	1.0
0°-30°	739.4	15.8
0°-40°	1203.3	25.7
0°-60°	2144.3	45.8
0°-90°	2960.6	63.2
90°-120°	524.4	11.2
90°-150°	1341.8	28.7
90°-180°	1721.0	36.8
0°-180°	4681.9	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	69	127	162	175	10
95°	33	61	115	148	160	36
105°	114	142	156	125	133	120
115°	203	219	258	286	297	200
125°	282	286	316	338	347	252
135°	349	350	363	382	387	268
145°	401	402	403	412	416	251
155°	441	440	440	442	440	203
165°	465	464	463	466	464	131
175°	476	474	474	476	474	45
180°	476	476	476	476	476	



TEST NUMBER: P331958

CATALOG NUMBER: S123DIP-S775D365U835-4F0-1E-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	51.4	63.2	74.9	86.8	98.9	111.0	123.0	135.1	143.1
90°	14.0	26.2	38.3	50.5	62.7	75.2	88.1	101.0	113.9	126.8	135.0
92.5°	19.3	29.4	39.5	49.5	59.6	70.9	83.3	95.8	108.2	120.7	128.9
95°	33.1	38.9	44.8	50.6	56.5	65.6	77.8	90.1	102.4	114.6	122.4
97.5°	53.6	60.3	67.1	73.8	80.6	86.6	91.8	97.0	102.3	107.5	115.1
100°	69.1	78.2	87.2	96.2	105.2	108.9	107.4	105.9	104.3	102.8	110.1
102.5°	87.0	94.8	102.6	110.5	118.3	120.8	117.9	115.0	112.2	109.3	113.9
105°	113.7	120.1	126.6	133.0	139.5	144.2	147.1	150.0	153.0	155.9	148.5
107.5°	140.8	146.3	151.7	157.1	162.6	170.6	181.2	191.8	202.4	213.0	209.1
110°	158.9	163.8	168.6	173.4	178.2	185.7	195.9	206.0	216.2	226.4	229.8



TEST NUMBER: P331958

CATALOG NUMBER: S123DIP-S775D365U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	177.0	181.0	185.0	189.1	193.1	200.0	209.8	219.6	229.4	239.2	245.1
115°	202.8	206.0	209.3	212.6	215.8	222.0	231.1	240.2	249.2	258.3	264.7
117.5°	228.5	230.8	233.1	235.4	237.7	243.0	251.2	259.4	267.7	275.9	282.0
120°	243.8	245.6	247.5	249.4	251.3	256.1	264.1	272.0	279.9	287.8	293.8
122.5°	260.2	261.4	262.5	263.7	264.9	269.3	276.9	284.5	292.1	299.7	305.3
125°	281.6	282.2	282.9	283.5	284.1	288.0	295.0	302.1	309.1	316.2	321.2
127.5°	303.4	303.8	304.2	304.6	304.9	308.1	314.1	320.0	326.0	332.0	336.8
130°	316.9	317.3	317.7	318.1	318.5	321.2	326.2	331.1	336.1	341.1	345.8
132.5°	329.1	329.7	330.3	330.8	331.4	333.7	337.7	341.7	345.6	349.6	354.2
135°	348.7	349.0	349.2	349.5	349.7	351.3	354.1	357.0	359.9	362.8	367.2
137.5°	365.5	365.9	366.3	366.7	367.1	368.2	369.8	371.4	373.0	374.6	378.7
140°	376.0	376.4	376.9	377.4	377.9	378.6	379.5	380.4	381.4	382.3	386.1
142.5°	386.4	386.7	387.0	387.3	387.6	387.9	388.3	388.7	389.0	389.4	392.8
145°	401.1	401.4	401.7	402.0	402.3	402.6	402.7	402.9	403.0	403.2	405.2
147.5°	413.8	414.2	414.5	414.9	415.2	415.5	415.7	415.8	416.0	416.1	416.8
150°	422.3	422.5	422.7	423.0	423.2	423.4	423.6	423.7	423.9	424.0	424.2
152.5°	429.9	430.0	430.1	430.2	430.3	430.5	430.5	430.6	430.7	430.8	431.1
155°	440.7	440.5	440.3	440.2	440.0	440.0	440.1	440.1	440.2	440.3	440.7
157.5°	449.0	449.0	449.0	448.9	448.9	448.9	448.8	448.7	448.6	448.6	449.0
160°	454.1	454.0	453.9	453.8	453.8	453.7	453.6	453.5	453.5	453.4	453.8
162.5°	458.9	458.7	458.5	458.3	458.1	457.9	457.8	457.8	457.7	457.6	458.1
165°	464.7	464.4	464.2	464.0	463.7	463.6	463.5	463.4	463.3	463.3	463.9
167.5°	469.2	468.9	468.6	468.3	467.9	467.8	467.8	467.8	467.8	467.8	468.4
170°	471.7	471.4	471.1	470.8	470.5	470.3	470.3	470.3	470.3	470.3	471.0
172.5°	473.4	473.1	472.7	472.3	471.9	471.8	471.8	471.9	472.0	472.0	472.7
175°	475.6	475.2	474.8	474.5	474.1	473.9	474.0	474.1	474.1	474.2	474.8
177.5°	476.2	475.9	475.6	475.3	474.9	474.8	474.9	474.9	475.0	475.1	475.6
180°	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6



TEST NUMBER: P331958

CATALOG NUMBER: S123DIP-S775D365U835-4F0-1E-UDD-D

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°	151.0	159.0	167.0	172.2	174.5	176.9	179.2	181.6
90°	143.3	151.5	159.7	165.1	167.5	170.0	172.5	175.0
92.5°	137.1	145.3	153.6	158.8	161.0	163.3	165.5	167.7
95°	130.1	137.9	145.7	150.7	153.0	155.4	157.7	160.0
97.5°	122.6	130.2	137.7	142.7	145.1	147.5	149.9	152.4
100°	117.5	124.9	132.3	137.2	139.6	142.0	144.4	146.8
102.5°	118.6	123.2	127.8	131.3	133.8	136.3	138.7	141.2
105°	141.2	133.8	126.4	123.8	126.1	128.3	130.6	132.8
107.5°	205.1	201.2	197.2	191.0	182.6	174.2	165.7	157.3
110°	233.3	236.8	240.2	237.3	227.9	218.5	209.2	199.8



TEST NUMBER: P331958

CATALOG NUMBER: S123DIP-S775D365U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	251.0	256.9	262.8	265.6	265.3	265.0	264.6	264.3
115°	271.1	277.4	283.8	288.1	290.3	292.4	294.6	296.8
117.5°	288.2	294.4	300.5	304.6	306.4	308.3	310.2	312.1
120°	299.8	305.7	311.7	315.5	317.2	318.8	320.4	322.0
122.5°	310.9	316.5	322.1	325.8	327.5	329.2	330.9	332.6
125°	326.3	331.3	336.4	339.8	341.6	343.4	345.1	346.9
127.5°	341.7	346.5	351.4	354.5	356.0	357.4	358.8	360.2
130°	350.5	355.3	360.0	363.0	364.2	365.5	366.7	368.0
132.5°	358.7	363.2	367.8	370.8	372.1	373.5	374.8	376.2
135°	371.6	376.0	380.4	383.1	384.1	385.0	385.9	386.8
137.5°	382.7	386.8	390.8	393.4	394.4	395.4	396.4	397.4
140°	389.9	393.7	397.5	399.9	400.9	401.9	402.9	403.9
142.5°	396.1	399.5	402.9	405.0	406.0	406.9	407.9	408.8
145°	407.2	409.3	411.3	412.7	413.7	414.6	415.5	416.5
147.5°	417.6	418.3	419.0	419.6	420.1	420.5	421.0	421.5
150°	424.4	424.5	424.7	424.9	425.1	425.3	425.6	425.8
152.5°	431.4	431.7	432.0	432.0	431.7	431.4	431.2	430.9
155°	441.1	441.5	441.9	441.8	441.4	440.9	440.4	439.9
157.5°	449.5	450.0	450.5	450.4	449.8	449.2	448.5	447.9
160°	454.3	454.8	455.3	455.2	454.7	454.1	453.6	453.0
162.5°	458.7	459.2	459.7	459.8	459.3	458.8	458.3	457.8
165°	464.5	465.2	465.8	465.8	465.3	464.7	464.2	463.6
167.5°	469.0	469.7	470.3	470.3	469.7	469.0	468.4	467.8
170°	471.6	472.2	472.8	472.8	472.2	471.6	471.0	470.3
172.5°	473.3	473.9	474.5	474.5	473.8	473.1	472.4	471.7
175°	475.3	475.9	476.4	476.4	475.8	475.1	474.5	473.9
177.5°	476.1	476.6	477.1	477.0	476.4	475.8	475.1	474.5
180°	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6

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