

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: P332158-930

Luminaire Tested: **S123DIW-S775D755U930-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332158-930
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-S775D755U930-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 755 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

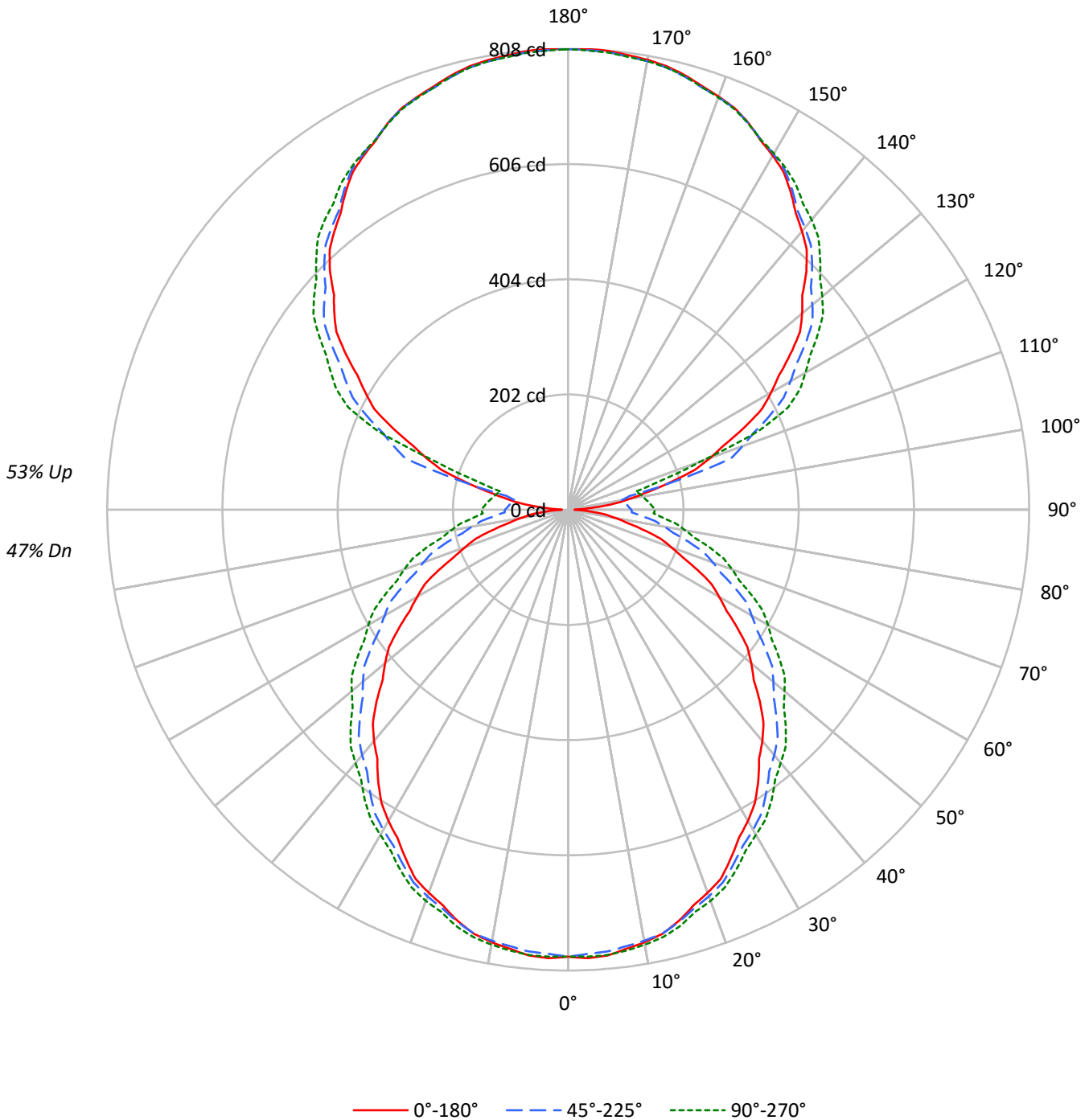
Lumens per Lamp: N/A
Luminaire Lumens: 5098.3 lumens
Efficiency: N/A
Efficacy: 113.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: General Diffuse

Input Watts (W): 45
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



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Luminous Intensity Polar Plot





TEST NUMBER: P332158-930

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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	0
RCR																		
0	107	107	107	107	98	98	98	98	82	82	82	67	67	67	54	54	54	47
1	96	91	87	83	88	84	80	77	70	68	65	58	56	54	46	45	43	38
2	87	79	73	67	80	73	67	62	61	57	53	50	47	44	40	38	36	31
3	79	69	62	56	72	64	57	52	53	48	44	44	40	37	35	32	30	26
4	72	61	53	47	66	56	49	44	47	42	37	39	35	31	31	28	26	22
5	66	54	46	40	61	50	43	37	42	36	32	35	30	27	28	25	22	19
6	61	49	40	34	56	45	38	32	38	32	28	31	27	24	25	22	19	16
7	56	44	36	30	52	41	33	28	34	29	24	28	24	21	23	20	17	14
8	52	40	32	26	48	37	30	25	31	26	22	26	22	18	21	18	15	13
9	49	36	29	23	45	34	27	22	29	23	19	24	20	16	19	16	14	12
10	45	33	26	21	42	31	24	20	26	21	17	22	18	15	18	15	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8436	8436	8436
5°	8462	8223	8228
10°	8386	8033	7993
15°	8278	7819	7738
20°	8123	7573	7456
25°	7933	7290	7160
30°	7737	7036	6861
35°	7518	6767	6621
40°	7310	6522	6365
45°	7079	6288	6161
50°	6848	6055	5934
55°	6597	5818	5731
60°	6352	5577	5522
65°	6098	5319	5274
70°	5718	5030	5022
75°	5236	4699	4763
80°	4684	4372	4467
85°	4170	4150	4296



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.3	1.5
10°-20°	211.8	4.2
20°-30°	316.7	6.2
30°-40°	378.3	7.4
40°-50°	395.8	7.8
50°-60°	371.4	7.3
60°-70°	310.2	6.1
70°-80°	221.9	4.4
80°-90°	134.6	2.6
90°-100°	112.4	2.2
100°-110°	201.0	3.9
110°-120°	376.9	7.4
120°-130°	451.3	8.9
130°-140°	467.7	9.2
140°-150°	429.9	8.4
150°-160°	345.0	6.8
160°-170°	222.6	4.4
170°-180°	76.7	1.5
0°-30°	602.8	11.8
0°-40°	981.1	19.2
0°-60°	1748.2	34.3
0°-90°	2414.9	47.4
90°-120°	690.2	13.5
90°-150°	2039.1	40.0
90°-180°	2683.0	52.6
0°-180°	5098.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	784	784	784	784	784	
5°	785	783	778	784	784	74
15°	747	749	749	757	756	210
25°	674	683	686	696	697	311
35°	580	594	605	618	622	363
45°	475	495	516	532	540	366
55°	362	390	421	443	451	324
65°	250	284	321	346	355	247
75°	136	176	219	246	257	145
85°	42	85	130	158	167	44
90°	12	60	111	141	152	9
95°	46	57	103	133	142	53
105°	186	210	195	118	122	196
115°	340	355	390	415	425	335
125°	475	481	507	526	534	425
135°	590	594	605	621	624	454
145°	680	683	684	692	696	425
155°	748	747	748	750	747	345
165°	789	787	786	791	787	223
175°	808	805	805	809	804	77
180°	808	808	808	808	808	



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CATALOG NUMBER: S123DIW-S775D755U930-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7
2.5°	787.1	786.6	786.2	785.7	785.3	784.4	783.3	782.0	780.8	779.6	780.8
5°	784.6	784.2	783.7	783.4	783.0	782.3	781.1	780.0	778.9	777.7	779.3
7.5°	776.8	776.9	777.0	777.1	777.1	776.7	775.5	774.5	773.3	772.3	774.1
10°	770.1	770.4	770.8	771.2	771.5	771.3	770.3	769.4	768.4	767.4	769.4
12.5°	761.8	762.4	762.9	763.4	763.9	763.9	763.3	762.6	762.0	761.3	763.0
15°	747.0	747.5	748.1	748.7	749.3	749.4	749.3	749.1	748.9	748.7	750.6
17.5°	728.2	729.4	730.5	731.6	732.7	733.3	733.2	733.1	733.0	733.0	734.7
20°	714.5	715.7	716.8	718.0	719.1	719.8	720.2	720.6	721.0	721.4	723.1
22.5°	700.2	701.3	702.5	703.6	704.7	705.6	706.1	706.6	707.2	707.7	709.9
25°	674.4	676.3	678.2	680.1	682.0	683.2	683.8	684.4	684.9	685.5	687.9
27.5°	648.5	650.6	652.8	654.9	657.1	658.8	660.0	661.2	662.4	663.7	665.8
30°	630.0	632.5	635.0	637.4	639.8	641.9	643.4	644.9	646.5	647.9	650.2
32.5°	609.5	612.3	615.1	617.8	620.6	623.0	624.9	627.0	628.9	630.9	633.3
35°	580.5	583.5	586.6	589.6	592.6	595.4	597.9	600.3	602.8	605.3	608.1
37.5°	549.8	553.2	556.6	560.0	563.5	566.6	569.7	572.7	575.8	578.8	582.0
40°	529.3	532.7	536.1	539.6	542.9	546.6	550.3	554.2	557.9	561.7	564.9
42.5°	506.7	510.9	515.1	519.3	523.4	527.5	531.4	535.4	539.3	543.3	546.8
45°	474.7	479.2	483.7	488.3	492.8	497.5	502.2	507.0	511.8	516.5	520.1
47.5°	441.0	446.2	451.3	456.5	461.6	466.9	472.4	477.8	483.2	488.6	492.7
50°	419.1	424.4	429.7	435.1	440.4	446.0	451.9	457.8	463.7	469.5	473.9
52.5°	395.9	401.5	407.2	412.8	418.4	424.4	431.0	437.4	443.9	450.4	454.9
55°	362.0	368.2	374.5	380.7	387.0	393.5	400.4	407.2	414.0	420.9	426.0
57.5°	328.8	335.3	341.9	348.4	355.0	361.9	369.4	376.9	384.3	391.8	397.0
60°	305.7	312.4	319.3	326.1	333.0	340.2	348.1	355.8	363.5	371.4	376.7
62.5°	283.7	290.7	297.7	304.7	311.7	319.3	327.5	335.7	344.0	352.2	357.5
65°	250.1	257.6	264.9	272.3	279.7	287.6	296.0	304.3	312.7	321.0	326.7
67.5°	216.0	223.8	231.7	239.5	247.4	255.6	264.1	272.6	281.0	289.6	295.8
70°	192.1	200.2	208.4	216.5	224.7	233.3	242.5	251.5	260.7	269.8	275.8
72.5°	170.2	178.4	186.5	194.7	202.8	211.7	221.0	230.5	239.9	249.2	255.5
75°	135.7	144.6	153.6	162.5	171.4	180.6	190.0	199.6	209.0	218.6	224.8
77.5°	105.7	114.7	123.7	132.6	141.6	150.9	160.5	170.1	179.6	189.1	195.8
80°	84.5	93.8	103.1	112.4	121.7	131.3	141.1	151.0	160.9	170.7	177.2
82.5°	66.0	75.5	85.0	94.4	103.9	113.6	123.6	133.6	143.7	153.7	160.1
85°	41.8	51.3	60.8	70.3	79.7	89.5	99.6	109.7	119.7	129.8	136.2
87.5°	22.8	32.5	42.2	51.9	61.7	71.6	81.6	91.6	101.6	111.6	118.2
90°	11.7	22.3	32.9	43.6	54.2	65.2	76.6	88.1	99.5	110.9	117.8
92.5°	21.6	29.6	37.6	45.6	53.6	63.0	73.9	84.7	95.6	106.4	113.5
95°	46.0	47.9	49.8	51.8	53.7	60.1	70.8	81.6	92.4	103.1	109.9
97.5°	81.9	86.2	90.3	94.6	98.8	100.6	99.9	99.1	98.4	97.7	104.4
100°	109.1	117.8	126.5	135.3	144.0	142.4	130.3	118.2	106.2	94.1	100.6
102.5°	140.1	147.5	154.8	162.2	169.6	166.2	152.1	137.9	123.8	109.7	111.7
105°	185.6	191.6	197.6	203.7	209.7	210.8	206.9	203.1	199.3	195.4	177.2
107.5°	232.8	237.9	242.9	247.9	253.0	260.3	269.9	279.6	289.3	298.9	286.7
110°	264.3	268.8	273.3	277.8	282.3	289.0	298.1	307.1	316.2	325.2	325.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	295.1	298.8	302.6	306.3	310.1	316.3	325.1	333.9	342.6	351.3	356.2
115°	339.7	342.8	345.8	348.9	352.0	357.5	365.5	373.6	381.6	389.6	395.5
117.5°	383.5	385.9	388.2	390.7	393.1	397.8	404.8	411.8	418.8	425.9	431.5
120°	410.2	412.3	414.5	416.6	418.7	423.1	429.8	436.5	443.2	449.8	455.3
122.5°	438.0	439.5	441.0	442.5	443.9	447.9	454.4	460.8	467.3	473.8	478.7
125°	475.3	476.4	477.4	478.5	479.6	483.1	489.2	495.2	501.2	507.3	511.5
127.5°	512.3	513.1	514.0	514.9	515.8	518.9	524.0	529.2	534.4	539.6	543.8
130°	535.3	536.2	537.0	537.9	538.8	541.4	545.8	550.1	554.4	558.7	562.9
132.5°	556.7	557.7	558.8	559.8	560.8	563.0	566.6	570.0	573.5	576.9	580.9
135°	590.3	590.8	591.5	592.1	592.7	594.3	597.0	599.6	602.2	604.8	608.6
137.5°	618.9	619.7	620.6	621.5	622.3	623.5	624.9	626.4	627.9	629.4	633.0
140°	637.4	638.2	639.0	639.8	640.6	641.5	642.5	643.4	644.4	645.4	648.7
142.5°	655.2	655.8	656.5	657.1	657.8	658.4	658.8	659.3	659.9	660.4	663.3
145°	680.0	680.8	681.5	682.2	683.0	683.5	683.7	684.0	684.3	684.5	686.3
147.5°	702.5	703.1	703.8	704.3	705.0	705.4	705.7	706.0	706.2	706.5	707.2
150°	717.0	717.3	717.7	718.1	718.5	718.8	719.2	719.4	719.7	719.9	720.2
152.5°	729.9	730.1	730.3	730.4	730.7	730.8	731.0	731.2	731.3	731.5	731.9
155°	748.1	747.9	747.6	747.3	747.1	747.0	747.1	747.3	747.4	747.5	748.2
157.5°	762.3	762.3	762.2	762.2	762.2	762.1	762.0	761.8	761.7	761.6	762.4
160°	770.9	770.8	770.7	770.5	770.4	770.3	770.1	770.0	769.9	769.7	770.5
162.5°	779.1	778.8	778.4	778.0	777.7	777.5	777.3	777.2	777.1	776.9	777.9
165°	789.0	788.6	788.1	787.7	787.3	787.1	786.9	786.8	786.7	786.5	787.6
167.5°	796.6	796.1	795.6	795.0	794.5	794.2	794.2	794.2	794.2	794.2	795.2
170°	801.0	800.4	799.9	799.3	798.8	798.5	798.5	798.5	798.5	798.5	799.6
172.5°	803.8	803.2	802.5	801.9	801.3	801.0	801.1	801.2	801.3	801.4	802.5
175°	807.6	806.8	806.2	805.5	804.9	804.6	804.7	804.9	805.0	805.1	806.1
177.5°	808.5	808.0	807.4	806.9	806.3	806.2	806.2	806.3	806.5	806.6	807.4
180°	807.6	807.6	807.6	807.6	807.6	807.6	807.6	807.6	807.6	807.6	807.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7
2.5°	782.0	783.3	784.4	785.0	784.8	784.6	784.5	784.4
5°	780.7	782.3	783.7	784.4	784.2	784.1	783.9	783.7
7.5°	776.0	778.0	779.8	780.6	780.4	780.2	780.0	779.8
10°	771.3	773.1	775.0	775.8	775.4	775.0	774.7	774.3
12.5°	764.8	766.5	768.3	769.0	768.6	768.3	767.8	767.4
15°	752.4	754.4	756.3	757.1	756.9	756.8	756.5	756.4
17.5°	736.4	738.1	739.8	740.5	740.3	740.0	739.7	739.5
20°	724.8	726.5	728.2	729.1	729.4	729.5	729.7	729.9
22.5°	712.0	714.2	716.3	717.4	717.3	717.1	717.1	716.9
25°	690.5	692.9	695.4	696.6	696.6	696.6	696.6	696.6
27.5°	667.9	670.0	672.1	673.3	673.4	673.6	673.8	673.9
30°	652.5	654.8	657.0	658.2	658.2	658.2	658.2	658.2
32.5°	635.7	638.1	640.6	642.0	642.5	642.9	643.4	643.8
35°	611.0	613.8	616.6	618.5	619.2	620.0	620.7	621.5
37.5°	585.2	588.5	591.7	593.6	594.2	594.8	595.4	596.1
40°	568.2	571.4	574.6	576.6	577.4	578.1	578.9	579.7
42.5°	550.3	553.8	557.4	559.7	560.8	561.8	562.9	563.9
45°	523.7	527.3	530.9	533.5	535.0	536.5	538.0	539.6
47.5°	496.8	500.8	504.9	507.5	508.7	509.9	511.0	512.2
50°	478.3	482.6	487.0	489.8	491.1	492.4	493.8	495.1
52.5°	459.4	464.0	468.5	471.6	473.2	474.8	476.5	478.1
55°	431.1	436.3	441.3	444.7	446.2	447.7	449.2	450.8
57.5°	402.2	407.3	412.5	416.0	417.8	419.6	421.3	423.1
60°	382.0	387.3	392.6	396.3	398.4	400.5	402.6	404.6
62.5°	362.9	368.2	373.5	377.1	379.0	381.0	382.9	384.8
65°	332.4	338.0	343.7	347.6	349.4	351.3	353.3	355.1
67.5°	302.0	308.3	314.5	318.4	319.9	321.6	323.2	324.7
70°	281.9	288.0	294.1	298.0	299.9	301.8	303.7	305.7
72.5°	261.7	267.9	274.2	278.3	280.1	282.0	283.9	285.8
75°	231.1	237.3	243.6	247.9	250.1	252.4	254.7	257.0
77.5°	202.4	209.0	215.6	219.7	221.5	223.2	225.0	226.7
80°	183.6	190.0	196.6	200.7	202.6	204.5	206.4	208.3
82.5°	166.6	173.0	179.4	183.6	185.6	187.4	189.3	191.2
85°	142.7	149.1	155.6	159.7	161.6	163.5	165.4	167.3
87.5°	124.7	131.3	137.9	142.1	144.1	146.0	148.0	149.9
90°	124.8	131.8	138.8	143.4	145.5	147.7	149.9	152.1
92.5°	120.7	127.8	134.9	139.5	141.4	143.3	145.2	147.1
95°	116.8	123.5	130.4	134.7	136.6	138.5	140.4	142.4
97.5°	111.1	117.8	124.6	129.0	130.9	133.0	135.0	137.1
100°	107.2	113.7	120.3	124.7	126.7	128.7	130.7	132.7
102.5°	113.7	115.8	117.8	119.9	122.1	124.2	126.3	128.5
105°	158.8	140.6	122.3	114.1	116.1	118.1	120.0	122.1
107.5°	274.4	262.2	250.0	235.8	219.7	203.6	187.4	171.4
110°	326.3	326.8	327.3	318.9	301.3	283.7	266.2	248.7



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CATALOG NUMBER: S123DIW-S775D755U930-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	361.1	365.9	370.8	372.0	369.7	367.3	365.0	362.6
115°	401.4	407.2	413.2	417.1	419.1	421.3	423.3	425.3
117.5°	437.0	442.6	448.2	451.8	453.4	454.9	456.6	458.1
120°	460.6	466.1	471.6	474.9	476.2	477.6	478.9	480.2
122.5°	483.7	488.6	493.6	496.8	498.2	499.7	501.1	502.6
125°	515.8	520.0	524.2	527.2	528.8	530.4	532.0	533.6
127.5°	548.0	552.1	556.4	558.9	559.9	561.0	562.0	563.0
130°	567.0	571.1	575.3	577.8	578.7	579.5	580.4	581.3
132.5°	584.9	588.9	592.9	595.3	596.2	597.1	598.0	599.0
135°	612.5	616.2	620.0	622.2	622.8	623.3	623.9	624.4
137.5°	636.7	640.3	643.9	646.0	646.8	647.4	648.2	648.8
140°	652.1	655.5	658.8	660.9	661.6	662.3	662.9	663.7
142.5°	666.3	669.3	672.3	674.0	674.6	675.1	675.7	676.3
145°	688.1	689.9	691.7	692.9	693.7	694.5	695.2	696.0
147.5°	707.9	708.7	709.4	709.8	709.9	709.9	710.0	710.0
150°	720.5	720.7	721.0	721.1	721.1	721.1	721.1	721.1
152.5°	732.4	732.9	733.4	733.4	732.8	732.3	731.7	731.2
155°	748.9	749.5	750.2	750.2	749.3	748.5	747.7	746.9
157.5°	763.2	763.9	764.8	764.7	763.6	762.5	761.6	760.5
160°	771.4	772.2	772.9	772.9	771.9	771.0	770.1	769.2
162.5°	778.8	779.7	780.6	780.6	779.8	778.9	778.1	777.3
165°	788.6	789.7	790.8	790.8	789.9	789.0	788.1	787.1
167.5°	796.3	797.4	798.5	798.5	797.4	796.3	795.2	794.2
170°	800.6	801.8	802.8	802.8	801.8	800.6	799.6	798.5
172.5°	803.6	804.6	805.7	805.6	804.5	803.3	802.1	801.0
175°	807.0	808.0	808.9	808.8	807.7	806.7	805.6	804.5
177.5°	808.3	809.1	810.0	809.8	808.8	807.7	806.7	805.6
180°	807.6	807.6	807.6	807.6	807.6	807.6	807.6	807.6

(END OF REPORT)