

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: P332160-927

Luminaire Tested: **S123DIW-S775D755U927-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332160-927
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-S775D755U927-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 755 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4905.2 lumens
Efficiency: N/A
Efficacy: 109.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

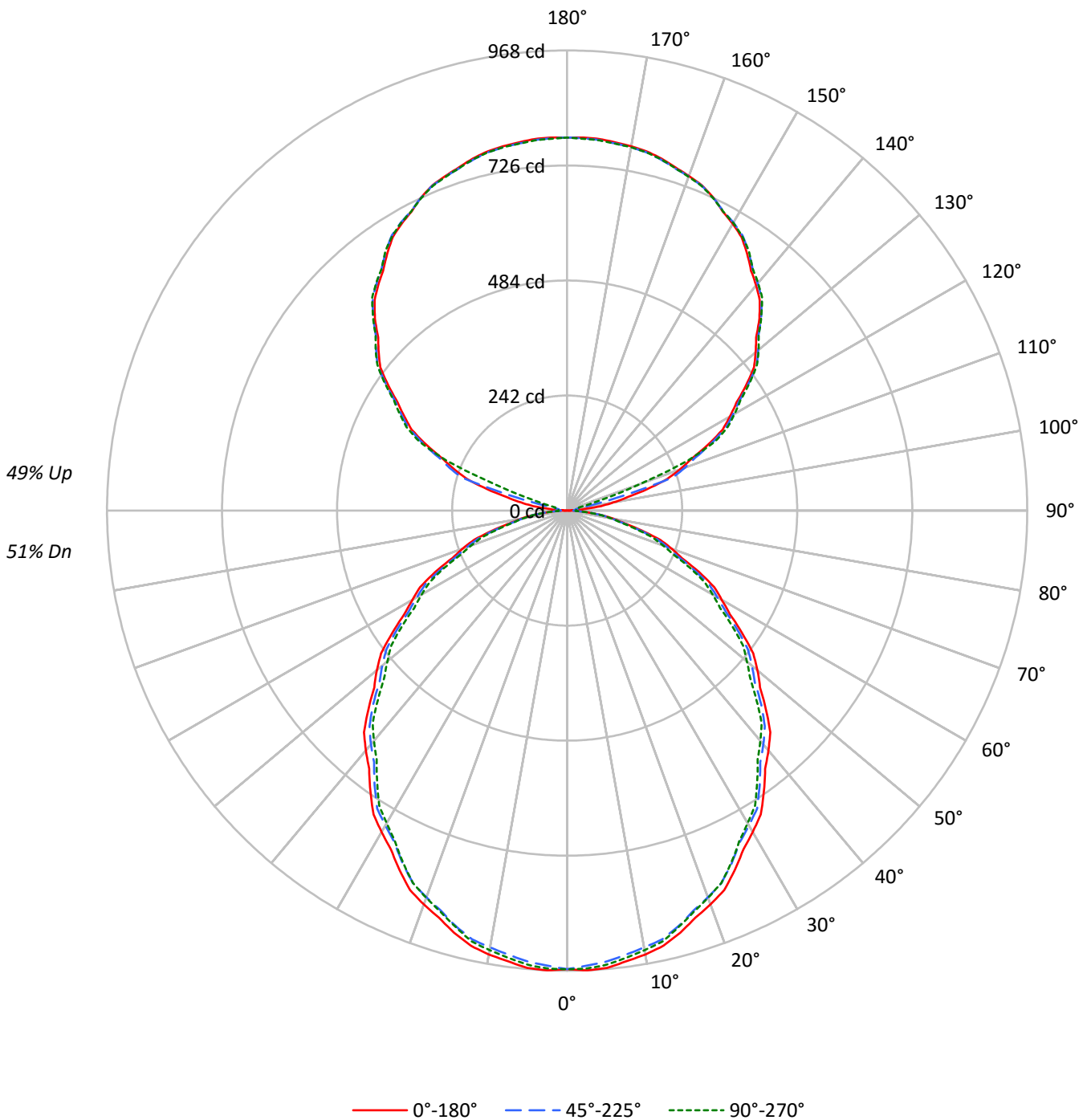
Input Watts (W): 45
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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	50	30	10	0		
RCR																										
0	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51					51			
1	98	94	90	86	90	87	83	80	74	71	69	62	60	58	50	49	48	43					43			
2	89	82	76	70	82	76	70	66	64	60	57	54	51	49	44	42	41	36					36			
3	81	72	64	59	75	67	60	55	57	52	48	48	44	41	39	37	34	30					30			
4	74	64	56	49	68	59	52	47	50	45	41	43	38	35	35	32	30	26					26			
5	68	57	48	42	63	53	45	40	45	39	35	38	34	30	32	28	26	23					23			
6	63	51	43	37	58	47	40	35	41	35	31	34	30	27	29	25	23	20					20			
7	58	46	38	32	54	43	36	30	37	31	27	31	27	24	26	23	20	18					18			
8	54	42	34	28	50	39	32	27	34	28	24	29	24	21	24	21	18	16					16			
9	50	38	30	25	46	36	29	24	31	25	21	26	22	19	22	19	16	14					14			
10	47	35	28	23	43	33	26	22	28	23	19	24	20	17	21	17	15	13					13			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10384	10384	10384
5°	10432	10289	10361
10°	10363	10200	10263
15°	10242	10085	10104
20°	10100	9919	9929
25°	9911	9723	9704
30°	9701	9506	9434
35°	9483	9276	9155
40°	9254	9021	8882
45°	9003	8788	8573
50°	8751	8500	8264
55°	8422	8203	7955
60°	8088	7858	7608
65°	7796	7480	7246
70°	7361	7046	6735
75°	6729	6488	6209
80°	6069	5808	5759
85°	5323	5125	4915



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.9	1.9
10°-20°	256.6	5.2
20°-30°	379.0	7.7
30°-40°	442.7	9.0
40°-50°	445.1	9.1
50°-60°	391.0	8.0
60°-70°	291.3	5.9
70°-80°	166.0	3.4
80°-90°	49.8	1.0
90°-100°	28.5	0.6
100°-110°	136.0	2.8
110°-120°	326.6	6.7
120°-130°	415.9	8.5
130°-140°	444.3	9.1
140°-150°	415.5	8.5
150°-160°	335.2	6.8
160°-170°	216.3	4.4
170°-180°	74.5	1.5
0°-30°	726.5	14.8
0°-40°	1169.2	23.8
0°-60°	2005.3	40.9
0°-90°	2512.4	51.2
90°-120°	491.1	10.0
90°-150°	1766.8	36.0
90°-180°	2393.0	48.8
0°-180°	4905.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	965	965	965	965	965	
5°	966	961	952	960	959	91
15°	919	915	905	911	907	259
25°	834	829	819	819	817	384
35°	722	716	706	701	697	451
45°	591	588	577	568	563	456
55°	449	447	437	428	424	402
65°	306	302	294	287	284	302
75°	162	158	156	152	149	173
85°	43	42	42	40	40	47
90°	1	7	14	16	18	4
95°	36	13	18	22	22	44
105°	174	177	128	30	26	184
115°	326	329	335	340	343	322
125°	459	464	466	468	469	410
135°	572	575	578	579	578	440
145°	660	664	665	666	666	413
155°	727	726	726	729	726	335
165°	767	765	764	768	765	216
175°	785	782	782	786	782	75
180°	785	785	785	785	785	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	964.7	964.7	964.7	964.7	964.7	964.7	964.7	964.7	964.7	964.7	964.7
2.5°	968.0	967.4	966.9	966.2	965.7	964.6	962.9	961.3	959.6	958.1	959.5
5°	965.5	964.6	963.7	962.7	961.8	960.4	958.3	956.3	954.3	952.2	954.1
7.5°	956.1	955.1	954.2	953.3	952.4	950.9	948.7	946.7	944.5	942.5	944.1
10°	948.1	947.1	946.3	945.3	944.4	942.8	940.3	937.9	935.6	933.2	934.9
12.5°	937.5	936.7	936.0	935.2	934.4	932.9	930.7	928.4	926.1	923.8	925.1
15°	919.1	918.3	917.6	916.9	916.1	914.6	912.1	909.7	907.4	905.0	906.4
17.5°	897.6	896.7	895.7	894.8	893.8	892.2	889.8	887.3	884.9	882.6	883.6
20°	881.7	880.6	879.6	878.5	877.3	875.5	873.1	870.8	868.4	865.9	866.7
22.5°	863.8	862.7	861.6	860.5	859.4	857.6	855.2	852.9	850.5	848.0	848.7
25°	834.5	833.4	832.3	831.2	830.0	828.3	825.9	823.5	821.1	818.7	818.9
27.5°	803.1	802.0	801.0	799.9	798.8	797.0	794.4	791.9	789.3	786.6	786.8
30°	780.5	779.6	778.7	777.8	776.8	775.1	772.5	769.9	767.4	764.8	764.8
32.5°	758.0	756.8	755.5	754.3	753.1	751.5	749.5	747.5	745.5	743.5	742.5
35°	721.7	720.6	719.5	718.4	717.2	715.5	713.0	710.7	708.3	705.9	704.8
37.5°	684.4	683.1	681.7	680.2	678.9	677.0	674.5	672.1	669.6	667.3	665.9
40°	658.6	657.5	656.4	655.3	654.2	652.4	649.7	647.2	644.6	642.0	640.6
42.5°	632.7	631.4	630.2	629.0	627.7	625.8	623.2	620.6	618.1	615.4	614.0
45°	591.4	590.7	589.9	589.2	588.4	586.9	584.5	582.1	579.7	577.3	575.1
47.5°	550.4	549.4	548.3	547.2	546.1	544.5	542.2	540.0	537.7	535.5	533.3
50°	522.6	521.7	520.7	519.8	518.9	517.2	514.8	512.5	510.0	507.6	505.6
52.5°	493.4	492.7	492.1	491.5	490.8	489.3	486.7	484.2	481.6	479.1	477.4
55°	448.8	448.5	448.4	448.2	448.0	446.7	444.3	442.0	439.5	437.1	435.1
57.5°	406.3	405.7	405.0	404.4	403.8	402.5	400.6	398.6	396.7	394.8	393.0
60°	375.7	375.6	375.4	375.2	375.0	373.8	371.6	369.4	367.2	365.0	363.3
62.5°	348.6	348.1	347.6	347.1	346.7	345.3	343.1	340.9	338.7	336.4	334.8
65°	306.1	305.1	304.2	303.3	302.4	301.0	299.1	297.3	295.5	293.7	292.2
67.5°	261.1	260.3	259.5	258.6	257.9	256.7	255.4	254.0	252.5	251.2	249.9
70°	233.9	232.8	231.7	230.6	229.5	228.4	227.3	226.2	225.1	223.9	222.7
72.5°	205.4	204.5	203.7	203.0	202.2	201.1	199.9	198.6	197.3	196.1	195.0
75°	161.8	161.0	160.3	159.5	158.8	158.1	157.6	157.0	156.5	156.0	155.0
77.5°	123.1	122.7	122.3	121.9	121.4	121.0	120.3	119.6	119.0	118.3	117.6
80°	97.9	97.4	96.8	96.3	95.7	95.2	94.8	94.5	94.1	93.7	93.6
82.5°	73.4	73.2	73.1	73.0	72.9	72.8	72.7	72.6	72.6	72.5	72.2
85°	43.1	42.8	42.4	42.1	41.7	41.5	41.5	41.5	41.5	41.5	41.1
87.5°	17.3	17.2	17.0	16.8	16.6	16.6	16.8	17.0	17.2	17.4	17.3
90°	0.6	1.9	3.2	4.4	5.8	7.3	9.0	10.6	12.3	14.0	14.5
92.5°	10.9	10.5	10.1	9.7	9.4	9.8	11.1	12.4	13.6	14.9	15.8
95°	35.6	30.3	25.0	19.6	14.3	12.4	13.8	15.2	16.6	18.1	19.0
97.5°	71.5	69.1	66.7	64.3	61.9	56.1	46.7	37.4	28.1	18.8	19.8
100°	98.5	101.1	103.7	106.3	108.8	100.1	79.9	59.7	39.5	19.3	20.3
102.5°	129.3	131.2	133.0	134.9	136.7	126.7	104.6	82.5	60.4	38.3	35.2
105°	173.7	175.2	176.6	178.0	179.4	174.3	162.6	151.0	139.3	127.7	104.7
107.5°	220.5	221.7	222.8	224.0	225.1	226.6	228.5	230.3	232.2	234.0	217.1
110°	251.8	252.9	253.9	254.9	256.0	257.2	258.6	260.1	261.5	262.9	258.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	281.7	282.6	283.5	284.5	285.4	286.6	288.0	289.5	290.9	292.3	292.4
115°	325.8	326.6	327.4	328.2	329.0	329.9	331.1	332.2	333.4	334.6	335.9
117.5°	368.7	369.6	370.6	371.5	372.5	373.3	373.8	374.5	375.0	375.7	376.7
120°	395.2	396.4	397.6	398.7	399.9	400.7	401.1	401.5	401.9	402.2	403.3
122.5°	422.3	423.3	424.2	425.2	426.1	426.8	427.3	427.9	428.3	428.8	429.5
125°	459.4	460.4	461.4	462.5	463.5	464.3	464.8	465.3	465.8	466.4	466.6
127.5°	495.3	496.3	497.3	498.4	499.4	500.3	500.9	501.5	502.1	502.7	503.1
130°	517.6	518.7	519.8	520.8	521.8	522.6	523.1	523.6	524.1	524.7	525.1
132.5°	539.1	540.1	541.1	542.2	543.3	544.0	544.4	544.8	545.2	545.7	546.1
135°	571.9	572.7	573.4	574.2	575.0	575.6	576.2	576.6	577.2	577.7	578.1
137.5°	599.8	600.8	601.8	602.8	603.8	604.4	604.7	605.0	605.3	605.5	606.2
140°	618.5	619.2	620.0	620.8	621.6	622.2	622.6	623.0	623.4	623.8	624.2
142.5°	635.7	636.5	637.3	638.1	638.9	639.4	639.8	640.2	640.6	641.0	641.4
145°	659.9	660.8	661.7	662.6	663.5	664.1	664.3	664.6	664.9	665.1	665.4
147.5°	682.6	683.2	683.8	684.4	685.0	685.4	685.7	686.0	686.2	686.4	686.7
150°	696.6	697.0	697.4	697.8	698.2	698.5	698.8	699.0	699.3	699.5	699.8
152.5°	709.2	709.4	709.6	709.7	710.0	710.1	710.3	710.4	710.6	710.7	711.1
155°	726.9	726.7	726.4	726.1	725.9	725.8	726.0	726.1	726.2	726.4	727.0
157.5°	740.7	740.7	740.6	740.6	740.6	740.5	740.4	740.2	740.1	740.0	740.8
160°	749.1	748.9	748.8	748.7	748.5	748.5	748.3	748.1	748.1	747.9	748.7
162.5°	757.0	756.7	756.3	756.0	755.7	755.4	755.3	755.2	755.0	754.9	755.8
165°	766.6	766.2	765.8	765.4	765.0	764.8	764.6	764.5	764.4	764.2	765.2
167.5°	774.0	773.5	773.0	772.5	772.0	771.7	771.7	771.7	771.7	771.7	772.7
170°	778.2	777.7	777.2	776.7	776.2	775.9	775.9	775.9	775.9	775.9	776.9
172.5°	781.0	780.4	779.7	779.2	778.6	778.2	778.4	778.5	778.6	778.7	779.7
175°	784.7	783.9	783.3	782.7	782.0	781.8	781.9	782.0	782.2	782.3	783.2
177.5°	785.5	785.1	784.5	784.0	783.5	783.3	783.4	783.5	783.6	783.7	784.5
180°	784.7	784.7	784.7	784.7	784.7	784.7	784.7	784.7	784.7	784.7	784.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	964.7	964.7	964.7	964.7	964.7	964.7	964.7	964.7
2.5°	961.0	962.5	963.9	964.6	964.5	964.3	964.2	964.0
5°	955.9	957.7	959.6	960.4	960.0	959.6	959.3	958.9
7.5°	945.8	947.5	949.1	949.8	949.6	949.4	949.1	949.0
10°	936.5	938.1	939.8	940.5	940.1	939.7	939.4	939.0
12.5°	926.3	927.5	928.8	929.2	929.0	928.8	928.6	928.4
15°	907.9	909.3	910.9	911.0	909.9	908.8	907.8	906.7
17.5°	884.6	885.7	886.7	887.0	886.6	886.2	885.8	885.4
20°	867.4	868.2	868.9	869.0	868.5	867.9	867.4	866.8
22.5°	849.2	849.9	850.4	850.3	849.7	849.0	848.3	847.6
25°	819.0	819.3	819.4	819.3	818.7	818.2	817.6	817.1
27.5°	787.0	787.1	787.3	787.0	786.3	785.6	784.9	784.2
30°	764.8	764.8	764.8	764.1	762.9	761.5	760.3	759.0
32.5°	741.5	740.5	739.4	738.6	737.8	737.1	736.4	735.8
35°	703.7	702.6	701.5	700.4	699.5	698.6	697.7	696.7
37.5°	664.6	663.2	661.9	661.0	660.4	659.8	659.2	658.6
40°	639.1	637.6	636.1	635.0	634.3	633.5	632.8	632.1
42.5°	612.5	611.0	609.6	608.5	607.8	607.0	606.3	605.5
45°	572.9	570.7	568.5	566.9	566.0	565.1	564.1	563.2
47.5°	531.2	529.0	526.8	525.3	524.5	523.7	522.9	522.0
50°	503.6	501.5	499.6	498.0	496.9	495.7	494.6	493.5
52.5°	475.6	473.9	472.1	470.8	469.7	468.6	467.5	466.4
55°	433.1	431.0	429.0	427.5	426.6	425.7	424.8	423.9
57.5°	391.2	389.4	387.6	386.2	385.1	384.0	382.9	381.9
60°	361.6	360.0	358.3	357.0	356.1	355.2	354.3	353.4
62.5°	333.1	331.4	329.8	328.7	328.0	327.4	326.8	326.1
65°	290.7	289.2	287.7	286.7	286.1	285.6	285.0	284.5
67.5°	248.6	247.3	246.0	244.9	244.2	243.4	242.6	241.9
70°	221.4	220.1	218.8	217.7	216.7	215.9	214.9	214.0
72.5°	193.8	192.7	191.5	190.7	190.2	189.7	189.3	188.8
75°	154.1	153.2	152.3	151.5	151.0	150.4	149.9	149.3
77.5°	117.0	116.4	115.7	115.5	115.5	115.5	115.5	115.5
80°	93.4	93.2	93.0	92.9	92.9	92.9	92.9	92.9
82.5°	71.9	71.5	71.1	70.9	70.8	70.7	70.5	70.3
85°	40.7	40.4	40.0	39.8	39.8	39.8	39.8	39.8
87.5°	17.3	17.3	17.2	17.2	17.3	17.3	17.3	17.4
90°	15.1	15.5	16.1	16.5	16.7	17.0	17.2	17.5
92.5°	16.6	17.4	18.2	18.7	18.9	19.0	19.2	19.3
95°	19.9	20.8	21.7	22.2	22.2	22.2	22.2	22.2
97.5°	20.8	21.9	22.9	23.5	23.6	23.8	23.9	24.0
100°	21.3	22.3	23.4	24.0	24.1	24.2	24.3	24.5
102.5°	31.9	28.8	25.5	24.0	24.2	24.5	24.7	25.0
105°	81.8	58.9	36.0	24.6	24.9	25.1	25.4	25.7
107.5°	200.3	183.5	166.8	149.7	132.4	115.1	97.8	80.6
110°	254.4	250.1	245.8	234.4	215.9	197.3	178.8	160.3



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CATALOG NUMBER: S123DIW-S775D755U927-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	292.5	292.6	292.6	290.7	286.8	282.9	278.9	275.0
115°	337.2	338.5	339.8	340.7	341.2	341.7	342.2	342.8
117.5°	377.7	378.7	379.8	380.3	380.5	380.6	380.6	380.8
120°	404.3	405.4	406.4	406.9	406.9	406.9	406.9	406.9
122.5°	430.2	430.9	431.7	432.1	432.2	432.3	432.5	432.5
125°	466.8	467.1	467.4	467.6	467.9	468.2	468.4	468.7
127.5°	503.6	504.0	504.4	504.5	504.2	503.9	503.7	503.4
130°	525.7	526.2	526.7	526.9	526.6	526.3	526.1	525.8
132.5°	546.7	547.2	547.7	547.8	547.4	547.1	546.7	546.3
135°	578.5	578.8	579.2	579.2	578.8	578.5	578.1	577.7
137.5°	606.8	607.4	608.1	608.2	608.0	607.7	607.4	607.2
140°	624.8	625.3	625.8	626.0	625.7	625.4	625.2	624.9
142.5°	641.8	642.2	642.6	642.7	642.3	642.0	641.6	641.2
145°	665.7	665.9	666.1	666.3	666.3	666.3	666.3	666.3
147.5°	687.0	687.2	687.5	687.3	686.7	686.1	685.6	684.9
150°	700.1	700.3	700.5	700.5	700.1	699.7	699.3	698.9
152.5°	711.6	712.1	712.6	712.5	711.9	711.3	710.7	710.1
155°	727.6	728.3	729.0	728.9	728.1	727.3	726.5	725.7
157.5°	741.6	742.3	743.1	743.0	742.0	740.9	740.0	738.9
160°	749.5	750.3	751.0	751.0	750.0	749.2	748.2	747.3
162.5°	756.7	757.6	758.4	758.4	757.6	756.9	756.1	755.3
165°	766.3	767.3	768.3	768.4	767.5	766.6	765.7	764.8
167.5°	773.7	774.8	775.9	775.9	774.8	773.7	772.7	771.7
170°	777.9	779.0	780.1	780.1	779.0	777.9	776.9	775.9
172.5°	780.8	781.8	782.8	782.8	781.6	780.5	779.3	778.2
175°	784.1	785.1	785.9	785.8	784.8	783.8	782.8	781.7
177.5°	785.4	786.2	787.0	786.9	785.8	784.8	783.8	782.8
180°	784.7	784.7	784.7	784.7	784.7	784.7	784.7	784.7

(END OF REPORT)