

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: P332783-940

Luminaire Tested: **S124DIW-S795D770U940-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332783-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIW-S795D770U940-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 770 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5627.3 lumens
Efficiency: N/A
Efficacy: 125.1 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: General Diffuse

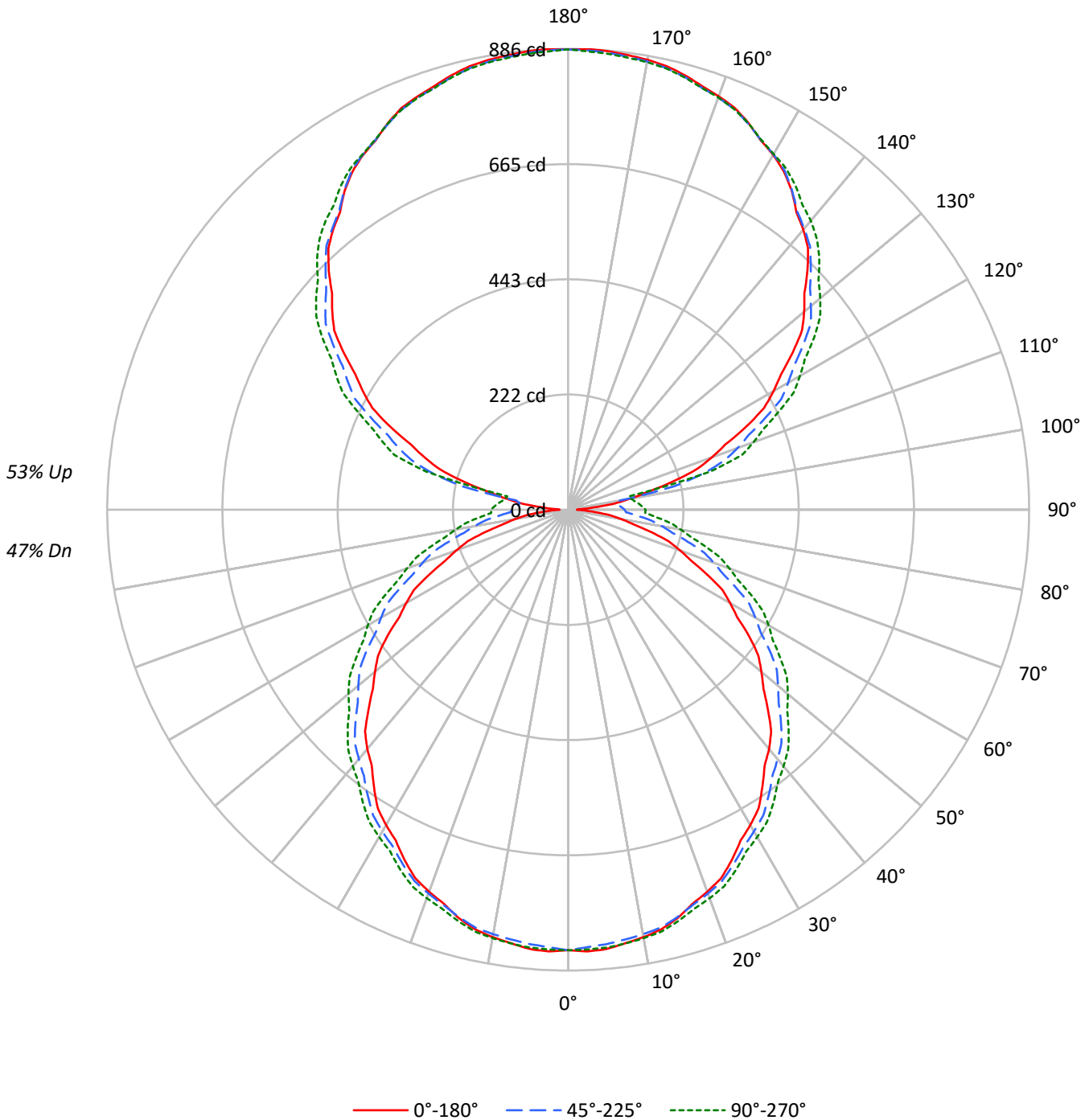
Input Watts (W): 45
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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	92	87	83	88	84	81	77	70	68	65	58	56	54	46	45	44	38
2	87	79	73	67	80	73	67	63	61	57	53	50	47	44	40	38	36	31
3	79	69	62	56	72	64	57	52	54	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	37	32	38	32	28	31	27	24	25	22	19	16
7	56	44	36	30	52	40	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	44	34	27	22	29	23	19	24	20	16	19	16	14	11
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°	6838	6838	6838
5°	6859	6683	6702
10°	6817	6573	6568
15°	6756	6446	6411
20°	6664	6307	6259
25°	6560	6151	6092
30°	6448	5995	5919
35°	6321	5835	5768
40°	6219	5684	5610
45°	6067	5543	5475
50°	5939	5383	5333
55°	5808	5231	5164
60°	5601	5036	5013
65°	5376	4829	4824
70°	5101	4592	4605
75°	4723	4331	4407
80°	4295	4081	4213
85°	3763	3857	4101



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.2	1.4
10°-20°	229.8	4.1
20°-30°	347.5	6.2
30°-40°	420.4	7.5
40°-50°	444.5	7.9
50°-60°	418.3	7.4
60°-70°	347.1	6.2
70°-80°	243.8	4.3
80°-90°	140.4	2.5
90°-100°	112.1	2.0
100°-110°	253.6	4.5
110°-120°	409.8	7.3
120°-130°	491.6	8.7
130°-140°	511.3	9.1
140°-150°	470.9	8.4
150°-160°	378.1	6.7
160°-170°	243.9	4.3
170°-180°	84.1	1.5
0°-30°	657.5	11.7
0°-40°	1077.9	19.2
0°-60°	1940.7	34.5
0°-90°	2671.9	47.5
90°-120°	775.5	13.8
90°-150°	2249.3	40.0
90°-180°	2955.0	52.5
0°-180°	5627.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	847	847	847	847	847	
5°	848	845	838	846	845	80
15°	813	814	811	819	818	229
25°	744	749	752	762	764	342
35°	651	662	672	684	688	407
45°	542	561	578	594	599	419
55°	425	445	473	492	498	378
65°	294	324	357	379	388	291
75°	163	198	238	264	273	174
85°	50	90	133	160	171	54
90°	17	62	108	139	149	12
95°	49	59	97	126	136	57
105°	208	232	269	296	283	218
115°	378	389	418	439	447	372
125°	527	530	551	570	577	470
135°	651	650	659	675	683	501
145°	749	750	750	756	761	468
155°	820	821	819	821	820	378
165°	865	862	862	866	861	244
175°	885	881	882	887	880	84
180°	885	885	885	885	885	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	847.0	847.0	847.0	847.0	847.0	847.0	847.0	847.0	847.0	847.0	847.0
2.5°	850.1	849.5	849.0	848.6	848.0	847.1	845.7	844.4	843.0	841.7	842.8
5°	847.9	847.3	846.7	846.1	845.4	844.4	842.8	841.4	839.9	838.5	840.2
7.5°	840.7	840.3	840.0	839.6	839.2	838.4	837.2	836.0	834.7	833.6	835.4
10°	834.6	834.5	834.3	834.0	833.8	833.2	832.1	831.1	830.0	828.9	830.9
12.5°	826.3	826.3	826.3	826.2	826.2	825.8	825.1	824.3	823.6	822.9	824.7
15°	812.9	813.1	813.2	813.5	813.7	813.5	812.9	812.3	811.5	810.9	812.9
17.5°	794.4	795.0	795.7	796.4	797.0	797.2	797.1	797.0	796.8	796.7	798.7
20°	781.6	782.2	782.8	783.5	784.1	784.5	784.7	784.9	785.2	785.3	787.5
22.5°	767.1	767.9	768.7	769.5	770.3	771.0	771.3	771.7	772.0	772.5	774.5
25°	743.6	744.8	746.2	747.4	748.7	749.7	750.3	750.9	751.5	752.2	754.5
27.5°	717.5	719.3	721.1	723.0	724.9	726.3	727.3	728.2	729.2	730.1	732.3
30°	700.0	701.7	703.4	705.1	706.8	708.3	709.8	711.2	712.7	714.2	716.5
32.5°	681.0	683.1	685.1	687.1	689.1	690.9	692.6	694.2	695.9	697.5	700.2
35°	650.7	653.2	655.8	658.3	660.8	663.1	665.2	667.4	669.4	671.5	674.5
37.5°	620.1	623.0	626.0	628.8	631.8	634.5	637.1	639.7	642.4	645.0	648.0
40°	600.4	603.2	605.8	608.6	611.4	614.2	617.2	620.1	623.0	626.0	629.2
42.5°	577.7	580.7	583.8	586.8	590.0	593.2	596.6	600.1	603.6	607.0	610.6
45°	542.5	546.5	550.5	554.6	558.6	562.6	566.6	570.6	574.5	578.5	582.2
47.5°	509.0	513.1	517.2	521.4	525.5	529.9	534.5	539.1	543.8	548.4	552.1
50°	484.6	489.3	493.9	498.6	503.2	507.8	512.5	517.1	521.7	526.4	530.7
52.5°	460.4	465.0	469.7	474.3	478.9	483.9	489.2	494.5	499.9	505.2	509.3
55°	424.9	429.4	433.8	438.2	442.6	448.0	454.3	460.7	467.0	473.3	477.5
57.5°	385.3	390.7	396.3	401.7	407.2	413.0	419.4	425.6	431.9	438.2	443.2
60°	359.4	365.0	370.4	375.9	381.4	387.6	394.6	401.5	408.5	415.4	420.3
62.5°	334.4	340.5	346.4	352.4	358.4	364.9	371.8	378.8	385.8	392.7	397.5
65°	294.0	300.8	307.6	314.2	321.0	328.0	335.1	342.3	349.5	356.6	361.9
67.5°	255.1	262.3	269.5	276.6	283.8	291.2	298.9	306.6	314.2	321.9	327.3
70°	228.5	235.8	242.9	250.1	257.3	264.8	272.9	280.9	288.8	296.9	302.6
72.5°	202.8	210.1	217.5	224.8	232.1	240.0	248.6	257.1	265.6	274.1	279.6
75°	163.2	170.9	178.7	186.5	194.3	202.7	211.5	220.3	229.3	238.1	244.0
77.5°	126.2	134.4	142.7	151.0	159.2	168.0	177.3	186.5	195.8	205.1	211.1
80°	103.3	111.8	120.2	128.7	137.1	146.0	155.2	164.5	173.8	183.1	189.4
82.5°	80.6	89.3	98.2	106.9	115.7	124.8	134.0	143.3	152.6	161.8	168.3
85°	50.3	59.1	67.9	76.9	85.7	94.9	104.3	113.8	123.3	132.8	139.1
87.5°	28.4	37.4	46.3	55.3	64.2	73.4	82.8	92.3	101.7	111.2	117.5
90°	17.1	27.2	37.3	47.3	57.3	67.5	77.8	88.0	98.2	108.4	115.5
92.5°	22.7	30.4	38.1	45.7	53.5	62.4	72.7	82.9	93.2	103.3	110.2
95°	48.8	50.6	52.6	54.6	56.5	61.9	70.7	79.5	88.3	97.1	103.6
97.5°	88.5	97.6	106.7	115.8	124.9	125.6	117.7	109.9	102.0	94.1	99.7
100°	119.0	127.2	135.3	143.4	151.5	149.5	137.4	125.4	113.2	101.2	104.4
102.5°	153.9	160.7	167.5	174.2	180.9	187.0	192.4	197.8	203.2	208.6	187.2
105°	207.8	212.9	217.9	223.1	228.2	235.0	243.5	252.1	260.6	269.1	275.7
107.5°	259.3	263.2	267.2	271.0	274.9	281.1	289.4	297.8	306.2	314.6	320.4
110°	293.6	296.9	300.3	303.7	307.1	312.9	321.2	329.5	337.7	346.0	351.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	326.6	330.1	333.5	336.9	340.3	345.7	353.2	360.6	368.1	375.5	380.1
115°	377.6	380.0	382.4	384.7	387.0	391.5	398.1	404.7	411.3	417.9	422.8
117.5°	424.5	426.2	427.9	429.6	431.4	435.6	442.2	448.8	455.4	462.0	466.3
120°	455.5	456.7	458.0	459.1	460.4	464.0	469.9	475.9	481.9	487.9	492.3
122.5°	485.2	485.6	486.1	486.6	487.1	490.3	496.3	502.3	508.3	514.2	518.6
125°	526.7	527.1	527.4	527.8	528.2	530.9	535.8	540.8	545.8	550.8	555.3
127.5°	566.8	566.7	566.6	566.6	566.5	568.8	573.5	578.3	583.0	587.7	591.5
130°	591.9	591.9	591.8	591.7	591.7	593.5	597.4	601.2	605.0	608.9	612.8
132.5°	615.7	615.8	615.9	615.9	616.0	617.6	620.9	624.2	627.4	630.7	634.5
135°	650.6	650.4	650.2	650.1	650.0	650.9	653.0	655.1	657.1	659.2	662.9
137.5°	682.2	682.1	681.9	681.7	681.6	682.2	683.6	684.9	686.3	687.7	691.1
140°	702.8	702.9	703.0	703.1	703.2	703.5	704.0	704.5	705.0	705.5	708.6
142.5°	720.6	721.1	721.6	722.1	722.6	722.8	722.9	722.9	723.0	723.1	725.8
145°	748.9	749.1	749.4	749.6	749.8	749.9	749.9	749.9	749.9	749.9	751.4
147.5°	771.5	772.1	772.8	773.4	774.0	774.2	774.1	773.9	773.7	773.6	773.9
150°	787.9	788.4	788.7	789.1	789.4	789.6	789.4	789.3	789.2	789.0	789.0
152.5°	800.9	801.4	801.8	802.3	802.7	802.7	802.5	802.3	802.0	801.7	801.9
155°	820.1	820.3	820.4	820.6	820.7	820.6	820.1	819.7	819.2	818.8	819.4
157.5°	836.4	836.3	836.2	836.2	836.1	835.7	835.3	834.7	834.2	833.7	834.5
160°	845.9	845.4	845.1	844.6	844.2	843.8	843.7	843.6	843.4	843.3	844.2
162.5°	854.3	853.8	853.3	852.7	852.1	851.8	851.7	851.5	851.3	851.2	852.1
165°	865.1	864.3	863.6	862.9	862.2	861.8	861.8	861.8	861.8	861.8	863.0
167.5°	873.6	872.8	872.1	871.3	870.5	870.1	870.0	870.0	869.9	869.8	871.0
170°	878.3	877.4	876.6	875.7	874.9	874.4	874.6	874.8	874.9	875.0	876.2
172.5°	881.5	880.7	879.8	878.9	878.0	877.6	877.8	877.9	878.1	878.2	879.4
175°	884.9	884.0	883.2	882.3	881.5	881.1	881.2	881.4	881.5	881.6	883.0
177.5°	886.5	885.7	884.9	884.0	883.2	883.0	883.2	883.4	883.7	883.9	884.8
180°	884.9	884.9	884.9	884.9	884.9	884.9	884.9	884.9	884.9	884.9	884.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	847.0	847.0	847.0	847.0	847.0	847.0	847.0	847.0
2.5°	844.0	845.3	846.4	846.9	846.8	846.6	846.4	846.2
5°	841.9	843.6	845.2	846.0	845.7	845.5	845.3	845.1
7.5°	837.3	839.2	841.2	842.0	841.8	841.5	841.3	841.2
10°	832.8	834.6	836.6	837.4	837.2	837.0	836.8	836.6
12.5°	826.3	828.1	829.8	830.6	830.6	830.5	830.5	830.5
15°	814.8	816.6	818.5	819.4	819.2	818.9	818.8	818.5
17.5°	800.6	802.5	804.5	805.4	805.2	805.0	804.9	804.7
20°	789.5	791.7	793.8	794.9	794.9	794.9	794.9	794.9
22.5°	776.7	778.7	780.9	782.1	782.5	782.7	783.1	783.5
25°	756.8	759.1	761.4	762.7	762.9	763.1	763.3	763.6
27.5°	734.4	736.6	738.8	739.9	740.2	740.5	740.7	740.9
30°	718.8	721.1	723.4	724.9	725.3	725.7	726.1	726.6
32.5°	702.8	705.5	708.1	709.7	710.1	710.5	711.0	711.4
35°	677.4	680.4	683.3	685.1	685.7	686.3	687.1	687.7
37.5°	650.9	654.0	656.9	658.8	659.4	660.1	660.8	661.5
40°	632.3	635.5	638.6	640.6	641.5	642.3	643.2	644.0
42.5°	614.0	617.5	621.0	623.1	623.8	624.5	625.2	625.8
45°	585.8	589.3	592.9	595.2	596.3	597.4	598.4	599.4
47.5°	555.8	559.5	563.3	565.7	567.0	568.3	569.5	570.8
50°	534.8	539.0	543.2	546.0	547.2	548.6	549.8	551.1
52.5°	513.6	517.8	522.0	524.8	526.0	527.3	528.5	529.9
55°	481.7	486.0	490.2	492.9	494.2	495.4	496.7	497.9
57.5°	448.3	453.3	458.3	461.4	462.5	463.7	464.9	466.1
60°	425.2	430.0	434.8	438.1	439.8	441.5	443.2	444.9
62.5°	402.3	407.2	412.1	415.4	417.1	418.7	420.4	422.0
65°	367.2	372.5	377.7	381.2	382.9	384.6	386.2	387.9
67.5°	332.6	338.0	343.3	346.8	348.5	350.1	351.8	353.4
70°	308.3	314.0	319.7	323.2	324.7	326.2	327.6	329.1
72.5°	285.2	290.7	296.2	299.8	301.4	303.1	304.7	306.4
75°	249.9	255.7	261.7	265.6	267.5	269.4	271.3	273.1
77.5°	217.0	223.0	229.0	233.0	235.1	237.0	239.1	241.1
80°	195.7	202.1	208.4	212.3	214.0	215.7	217.4	219.1
82.5°	174.8	181.3	187.8	192.0	193.8	195.6	197.5	199.4
85°	145.4	151.8	158.1	162.3	164.4	166.5	168.6	170.8
87.5°	123.8	130.1	136.3	140.4	142.4	144.3	146.2	148.1
90°	122.4	129.5	136.4	140.9	142.9	144.9	146.9	148.8
92.5°	117.0	123.9	130.7	135.0	136.7	138.5	140.2	142.0
95°	110.2	116.8	123.4	127.7	129.7	131.8	133.8	135.9
97.5°	105.3	110.9	116.5	120.4	122.3	124.2	126.2	128.1
100°	107.6	110.8	114.0	116.4	118.0	119.6	121.3	122.9
102.5°	165.7	144.3	122.8	112.9	114.6	116.3	118.0	119.6
105°	282.3	288.9	295.5	296.9	293.4	289.7	286.1	282.6
107.5°	326.3	332.1	337.9	341.9	343.9	346.0	348.1	350.2
110°	356.2	361.4	366.5	370.1	372.3	374.4	376.6	378.7



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CATALOG NUMBER: S124DIW-S795D770U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	384.8	389.4	394.0	397.4	399.7	401.9	404.2	406.4
115°	427.8	432.7	437.7	440.9	442.3	443.8	445.2	446.7
117.5°	470.6	474.9	479.3	482.2	483.8	485.5	487.1	488.7
120°	496.9	501.4	505.9	508.8	510.2	511.6	513.0	514.4
122.5°	523.0	527.4	531.8	534.6	535.8	537.1	538.2	539.5
125°	559.6	564.1	568.6	571.5	572.9	574.4	575.8	577.1
127.5°	595.1	598.9	602.5	605.0	606.4	607.7	609.0	610.3
130°	616.7	620.6	624.6	627.1	628.5	629.7	631.0	632.2
132.5°	638.2	641.9	645.8	648.2	649.3	650.5	651.7	652.8
135°	666.6	670.2	673.9	676.5	678.1	679.6	681.2	682.7
137.5°	694.5	697.9	701.2	703.5	704.5	705.3	706.3	707.3
140°	711.9	715.1	718.2	720.4	721.7	722.8	724.0	725.2
142.5°	728.5	731.2	734.0	735.8	736.7	737.6	738.5	739.4
145°	752.8	754.2	755.5	756.9	758.0	759.1	760.3	761.4
147.5°	774.2	774.5	774.8	775.3	776.1	776.9	777.8	778.6
150°	789.0	789.0	789.0	789.1	789.3	789.3	789.5	789.6
152.5°	802.2	802.4	802.6	802.7	802.6	802.5	802.5	802.4
155°	819.9	820.6	821.1	821.2	820.7	820.3	819.8	819.5
157.5°	835.3	836.1	836.8	836.8	836.1	835.3	834.5	833.7
160°	845.1	845.9	846.8	846.8	845.9	845.1	844.2	843.3
162.5°	853.0	853.8	854.7	854.7	853.7	852.7	851.7	850.7
165°	864.2	865.3	866.5	866.5	865.1	863.8	862.5	861.1
167.5°	872.4	873.6	874.9	874.9	873.3	871.9	870.4	869.0
170°	877.4	878.6	879.8	879.6	878.2	876.6	875.2	873.7
172.5°	880.6	881.7	882.9	882.7	881.1	879.6	878.0	876.4
175°	884.3	885.6	887.0	886.7	884.9	883.2	881.5	879.7
177.5°	885.8	886.7	887.7	887.4	886.0	884.6	883.2	881.8
180°	884.9	884.9	884.9	884.9	884.9	884.9	884.9	884.9

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