

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: P332777-935

Luminaire Tested: **S124DIW-S795D470U935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332777-935
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-S795D470U935-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 470 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4403.2 lumens
Efficiency: N/A
Efficacy: 116.8 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

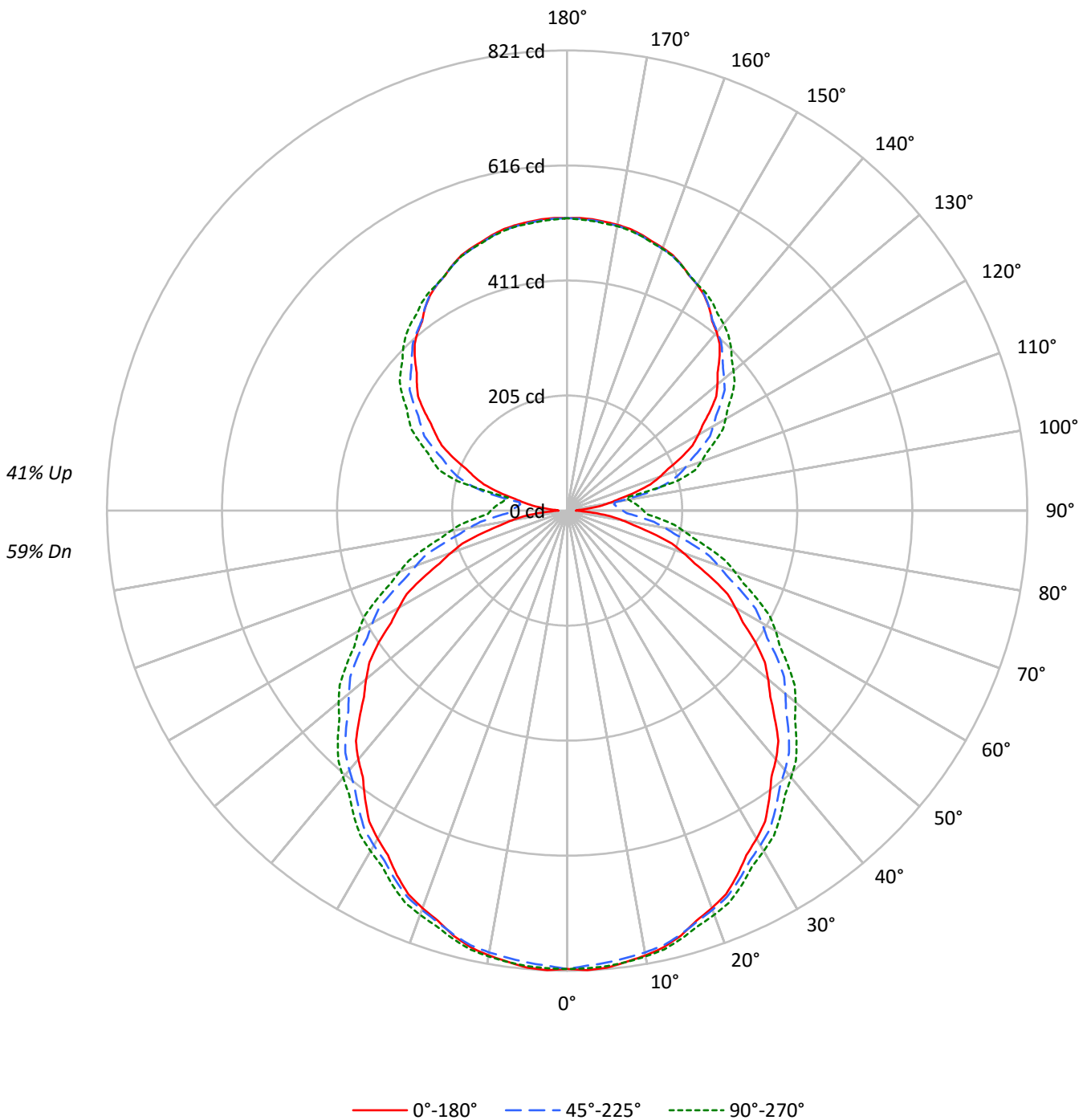
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	109	109	109	102	102	102	102	88	88	88	76	76	76	64	64	64	59
1	99	94	89	85	92	87	83	80	76	73	70	65	63	61	55	53	52	47
2	89	81	74	69	83	76	70	65	65	61	57	56	53	50	47	45	43	38
3	81	71	63	57	75	66	59	53	57	52	47	49	45	41	42	38	36	32
4	74	62	54	48	69	58	51	45	51	45	40	44	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	36	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	27	23	29	24	21	25	21	18	16
9	50	37	29	24	46	35	28	23	31	25	21	27	22	18	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°	6603	6603	6603
5°	6622	6453	6471
10°	6582	6347	6342
15°	6524	6225	6190
20°	6435	6090	6044
25°	6334	5939	5882
30°	6226	5788	5714
35°	6103	5635	5569
40°	6004	5488	5417
45°	5858	5352	5286
50°	5735	5197	5149
55°	5608	5051	4987
60°	5409	4863	4840
65°	5191	4662	4657
70°	4927	4433	4447
75°	4561	4182	4255
80°	4149	3940	4067
85°	3636	3724	3960



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.4	1.8
10°-20°	221.9	5.0
20°-30°	335.5	7.6
30°-40°	405.9	9.2
40°-50°	429.2	9.7
50°-60°	403.9	9.2
60°-70°	335.1	7.6
70°-80°	235.4	5.3
80°-90°	134.6	3.1
90°-100°	96.9	2.2
100°-110°	172.3	3.9
110°-120°	256.9	5.8
120°-130°	298.4	6.8
130°-140°	305.2	6.9
140°-150°	278.4	6.3
150°-160°	222.9	5.1
160°-170°	143.8	3.3
170°-180°	49.6	1.1
0°-30°	634.9	14.4
0°-40°	1040.8	23.6
0°-60°	1873.9	42.6
0°-90°	2579.0	58.6
90°-120°	526.0	11.9
90°-150°	1407.9	32.0
90°-180°	1824.0	41.4
0°-180°	4403.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	818	818	818	818	818	
5°	819	816	810	816	816	78
15°	785	786	783	791	790	221
25°	718	723	726	736	737	331
35°	628	639	648	661	664	393
45°	524	541	559	574	579	405
55°	410	430	457	475	481	365
65°	284	313	344	366	374	281
75°	158	192	230	255	264	168
85°	49	87	128	155	165	52
90°	16	57	99	127	136	11
95°	33	52	88	114	124	37
105°	126	147	182	207	202	132
115°	225	235	263	283	290	222
125°	312	314	335	353	359	279
135°	384	384	392	407	414	296
145°	442	442	442	448	452	276
155°	484	484	483	484	483	223
165°	510	508	508	511	508	144
175°	522	520	520	523	519	50
180°	522	522	522	522	522	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	817.9	817.9	817.9	817.9	817.9	817.9	817.9	817.9	817.9	817.9	817.9
2.5°	820.8	820.3	819.8	819.3	818.8	817.9	816.6	815.3	814.0	812.7	813.8
5°	818.7	818.1	817.5	816.9	816.3	815.3	813.8	812.4	811.0	809.6	811.2
7.5°	811.8	811.4	811.1	810.7	810.3	809.5	808.4	807.2	806.0	804.9	806.7
10°	805.9	805.7	805.6	805.3	805.1	804.5	803.5	802.5	801.4	800.4	802.3
12.5°	797.9	797.8	797.8	797.7	797.7	797.4	796.7	795.9	795.2	794.5	796.3
15°	784.9	785.1	785.2	785.5	785.7	785.5	784.9	784.3	783.6	783.0	784.9
17.5°	767.1	767.7	768.3	769.0	769.6	769.7	769.6	769.6	769.4	769.3	771.2
20°	754.7	755.3	755.9	756.5	757.1	757.5	757.7	757.9	758.1	758.3	760.3
22.5°	740.7	741.5	742.3	743.0	743.8	744.4	744.8	745.1	745.5	745.9	747.9
25°	718.0	719.2	720.5	721.7	722.9	723.8	724.4	725.0	725.7	726.3	728.5
27.5°	692.8	694.5	696.3	698.1	699.9	701.3	702.2	703.1	704.0	705.0	707.1
30°	675.9	677.5	679.2	680.8	682.4	683.9	685.4	686.7	688.2	689.6	691.8
32.5°	657.5	659.5	661.5	663.4	665.4	667.1	668.7	670.3	671.9	673.5	676.1
35°	628.3	630.7	633.2	635.6	638.0	640.2	642.3	644.4	646.4	648.4	651.3
37.5°	598.7	601.6	604.4	607.2	610.0	612.7	615.2	617.7	620.3	622.8	625.7
40°	579.7	582.4	585.0	587.6	590.3	593.1	595.9	598.7	601.6	604.4	607.5
42.5°	557.8	560.7	563.7	566.6	569.6	572.7	576.1	579.5	582.8	586.1	589.5
45°	523.8	527.7	531.6	535.5	539.3	543.2	547.1	551.0	554.7	558.6	562.1
47.5°	491.5	495.4	499.4	503.4	507.4	511.6	516.1	520.6	525.0	529.5	533.1
50°	468.0	472.4	476.9	481.4	485.9	490.3	494.8	499.3	503.8	508.2	512.4
52.5°	444.5	449.0	453.5	458.0	462.4	467.3	472.3	477.5	482.7	487.8	491.8
55°	410.3	414.6	418.9	423.1	427.4	432.6	438.7	444.8	450.9	457.0	461.1
57.5°	372.0	377.3	382.6	387.9	393.1	398.8	404.9	411.0	417.1	423.1	427.9
60°	347.1	352.4	357.7	363.0	368.2	374.3	381.0	387.7	394.4	401.1	405.8
62.5°	322.9	328.7	334.5	340.3	346.0	352.3	359.0	365.8	372.5	379.2	383.8
65°	283.9	290.4	297.0	303.4	310.0	316.7	323.6	330.5	337.4	344.3	349.4
67.5°	246.3	253.3	260.2	267.1	274.1	281.2	288.6	296.0	303.4	310.8	316.0
70°	220.7	227.6	234.5	241.5	248.4	255.7	263.5	271.2	278.9	286.6	292.1
72.5°	195.8	202.9	210.0	217.1	224.1	231.8	240.0	248.2	256.5	264.7	270.0
75°	157.6	165.1	172.5	180.1	187.6	195.7	204.2	212.8	221.4	229.9	235.6
77.5°	121.8	129.8	137.8	145.8	153.7	162.2	171.2	180.1	189.1	198.0	203.8
80°	99.8	108.0	116.1	124.2	132.4	140.9	149.9	158.9	167.8	176.8	182.9
82.5°	77.8	86.3	94.8	103.2	111.7	120.5	129.4	138.4	147.3	156.3	162.5
85°	48.6	57.1	65.6	74.2	82.7	91.6	100.7	109.9	119.1	128.2	134.3
87.5°	27.4	35.8	44.3	52.9	61.3	70.1	79.1	88.2	97.3	106.3	112.3
90°	15.8	24.9	34.0	43.1	52.2	61.5	70.9	80.3	89.8	99.3	105.6
92.5°	18.9	26.2	33.6	41.0	48.4	56.7	66.2	75.7	85.1	94.5	100.8
95°	33.4	37.1	40.9	44.7	48.5	54.5	62.9	71.4	79.8	88.3	94.3
97.5°	56.4	64.0	71.6	79.2	86.9	90.0	88.5	87.1	85.8	84.3	89.7
100°	74.0	80.9	87.7	94.6	101.5	102.9	98.8	94.8	90.8	86.8	90.7
102.5°	94.7	100.5	106.2	112.0	117.8	123.8	130.0	136.2	142.4	148.7	138.1
105°	125.7	130.3	134.9	139.5	144.0	150.3	158.3	166.3	174.3	182.2	188.0
107.5°	156.0	159.6	163.2	166.9	170.4	176.1	183.8	191.5	199.2	206.9	212.3
110°	175.9	179.0	182.1	185.2	188.3	193.7	201.4	209.0	216.6	224.3	229.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	195.1	198.1	201.1	204.1	207.1	212.2	219.1	226.2	233.2	240.3	244.8
115°	224.8	226.9	228.9	231.1	233.2	237.4	243.8	250.3	256.7	263.1	267.8
117.5°	252.3	253.7	255.2	256.7	258.1	261.9	268.2	274.5	280.7	287.0	291.2
120°	270.3	271.3	272.2	273.2	274.1	277.5	283.4	289.1	295.0	300.7	305.1
122.5°	287.8	288.1	288.4	288.8	289.1	292.1	297.8	303.5	309.2	315.0	319.1
125°	311.9	312.1	312.2	312.4	312.5	315.0	319.9	324.9	329.8	334.7	338.8
127.5°	335.4	335.4	335.3	335.1	335.0	337.1	341.4	345.7	350.0	354.3	357.9
130°	350.0	349.9	349.8	349.7	349.6	351.3	354.8	358.3	361.8	365.3	369.1
132.5°	364.1	364.0	363.9	363.9	363.9	365.3	368.2	371.2	374.1	377.0	380.6
135°	384.3	384.2	384.1	384.0	383.9	384.7	386.5	388.3	390.0	391.8	395.3
137.5°	402.9	402.7	402.5	402.3	402.2	402.7	403.7	404.8	405.9	407.0	410.1
140°	415.1	415.0	415.0	415.0	414.9	415.1	415.5	415.9	416.2	416.6	419.6
142.5°	425.2	425.5	425.8	426.1	426.4	426.5	426.5	426.5	426.5	426.4	428.9
145°	441.9	441.9	442.0	442.0	442.0	442.1	442.1	442.1	442.1	442.1	443.4
147.5°	455.2	455.5	455.7	456.1	456.3	456.4	456.3	456.2	456.2	456.1	456.3
150°	464.9	465.0	465.2	465.3	465.5	465.5	465.4	465.3	465.2	465.1	465.1
152.5°	472.3	472.5	472.7	472.9	473.2	473.2	473.1	472.9	472.8	472.6	472.8
155°	483.5	483.5	483.6	483.7	483.8	483.7	483.5	483.2	482.9	482.7	483.0
157.5°	493.1	493.0	492.9	492.9	492.8	492.7	492.4	492.1	491.8	491.5	492.0
160°	498.7	498.4	498.2	497.9	497.7	497.5	497.4	497.3	497.2	497.1	497.7
162.5°	503.7	503.3	503.0	502.7	502.4	502.1	502.0	502.0	501.9	501.8	502.3
165°	510.0	509.5	509.1	508.7	508.2	508.1	508.1	508.1	508.1	508.1	508.8
167.5°	515.0	514.5	514.1	513.7	513.2	512.9	512.9	512.8	512.8	512.7	513.5
170°	517.8	517.3	516.8	516.3	515.7	515.5	515.6	515.7	515.7	515.8	516.5
172.5°	519.7	519.2	518.7	518.1	517.6	517.4	517.5	517.5	517.6	517.7	518.4
175°	521.7	521.2	520.6	520.1	519.6	519.4	519.5	519.6	519.7	519.8	520.6
177.5°	522.6	522.2	521.7	521.2	520.7	520.6	520.6	520.8	520.9	521.1	521.6
180°	521.7	521.7	521.7	521.7	521.7	521.7	521.7	521.7	521.7	521.7	521.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	817.9	817.9	817.9	817.9	817.9	817.9	817.9	817.9
2.5°	814.9	816.1	817.3	817.8	817.6	817.4	817.3	817.1
5°	812.9	814.5	816.1	816.8	816.6	816.4	816.2	816.0
7.5°	808.5	810.3	812.2	813.0	812.8	812.5	812.4	812.2
10°	804.1	805.9	807.8	808.6	808.4	808.1	808.0	807.8
12.5°	797.9	799.6	801.2	802.0	802.0	801.9	801.9	801.8
15°	786.7	788.5	790.3	791.2	791.0	790.7	790.6	790.3
17.5°	773.0	774.9	776.8	777.7	777.5	777.3	777.1	777.0
20°	762.3	764.4	766.5	767.5	767.5	767.5	767.5	767.5
22.5°	749.9	751.9	754.0	755.2	755.5	755.8	756.1	756.5
25°	730.7	733.0	735.2	736.4	736.6	736.8	737.0	737.3
27.5°	709.1	711.2	713.3	714.5	714.7	715.0	715.2	715.4
30°	694.1	696.3	698.5	699.9	700.3	700.7	701.1	701.5
32.5°	678.6	681.2	683.7	685.3	685.6	686.0	686.5	686.9
35°	654.1	656.9	659.8	661.5	662.1	662.7	663.4	664.0
37.5°	628.5	631.5	634.3	636.1	636.7	637.4	638.0	638.7
40°	610.5	613.6	616.6	618.5	619.4	620.2	621.0	621.8
42.5°	592.9	596.2	599.6	601.7	602.3	603.0	603.6	604.2
45°	565.6	569.0	572.5	574.7	575.8	576.8	577.8	578.8
47.5°	536.7	540.3	543.9	546.2	547.5	548.7	549.9	551.1
50°	516.4	520.5	524.5	527.2	528.4	529.7	530.9	532.1
52.5°	495.9	500.0	504.0	506.7	507.9	509.1	510.3	511.6
55°	465.1	469.2	473.3	476.0	477.2	478.4	479.6	480.8
57.5°	432.8	437.6	442.5	445.5	446.6	447.7	448.9	450.0
60°	410.5	415.2	419.8	423.0	424.6	426.3	427.9	429.6
62.5°	388.5	393.2	397.9	401.1	402.7	404.3	405.9	407.5
65°	354.6	359.6	364.7	368.1	369.7	371.3	372.9	374.5
67.5°	321.2	326.3	331.5	334.8	336.5	338.0	339.7	341.2
70°	297.6	303.2	308.7	312.1	313.5	315.0	316.3	317.8
72.5°	275.3	280.7	286.0	289.5	291.0	292.7	294.2	295.8
75°	241.3	246.9	252.7	256.4	258.3	260.1	261.9	263.7
77.5°	209.6	215.3	221.1	225.0	227.0	228.9	230.8	232.8
80°	189.0	195.1	201.2	205.0	206.6	208.3	209.9	211.5
82.5°	168.8	175.0	181.3	185.4	187.1	188.9	190.7	192.5
85°	140.4	146.5	152.7	156.7	158.8	160.7	162.8	164.9
87.5°	118.3	124.3	130.4	134.2	136.0	137.9	139.7	141.5
90°	112.1	118.6	124.9	129.1	130.9	132.7	134.5	136.3
92.5°	107.0	113.3	119.6	123.6	125.2	126.8	128.5	130.2
95°	100.3	106.3	112.4	116.3	118.2	120.1	122.0	124.0
97.5°	95.1	100.5	105.8	109.4	111.2	113.1	114.9	116.8
100°	94.8	98.8	102.9	105.6	107.1	108.7	110.1	111.7
102.5°	127.5	116.9	106.4	101.9	103.5	105.1	106.7	108.3
105°	193.9	199.8	205.7	207.8	206.4	204.8	203.4	201.9
107.5°	217.7	223.1	228.5	232.0	233.8	235.7	237.5	239.3
110°	234.0	238.8	243.7	247.1	249.0	250.8	252.7	254.6



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CATALOG NUMBER: S124DIW-S795D470U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	249.3	253.7	258.2	261.4	263.4	265.4	267.3	269.2
115°	272.4	277.1	281.7	284.7	286.2	287.6	289.0	290.5
117.5°	295.3	299.5	303.8	306.7	308.2	309.9	311.4	313.1
120°	309.3	313.5	317.8	320.6	322.1	323.5	324.9	326.4
122.5°	323.3	327.4	331.6	334.3	335.6	336.9	338.2	339.5
125°	342.9	347.1	351.2	353.9	355.2	356.5	357.8	359.1
127.5°	361.5	365.2	368.8	371.3	372.6	373.8	375.1	376.5
130°	372.8	376.6	380.3	382.8	384.0	385.3	386.5	387.7
132.5°	384.3	387.8	391.4	393.8	394.9	396.1	397.3	398.4
135°	398.6	402.1	405.5	407.9	409.3	410.7	412.2	413.5
137.5°	413.3	416.5	419.6	421.6	422.7	423.6	424.6	425.5
140°	422.4	425.3	428.3	430.2	431.4	432.5	433.6	434.6
142.5°	431.4	433.9	436.4	438.2	439.0	439.9	440.7	441.6
145°	444.7	446.0	447.4	448.5	449.4	450.5	451.4	452.5
147.5°	456.5	456.8	457.0	457.4	458.2	459.0	459.7	460.5
150°	465.1	465.1	465.1	465.2	465.3	465.4	465.5	465.5
152.5°	472.9	473.0	473.2	473.2	473.2	473.1	473.0	473.0
155°	483.4	483.7	484.1	484.1	483.9	483.6	483.4	483.1
157.5°	492.4	492.8	493.3	493.3	492.8	492.4	492.0	491.5
160°	498.2	498.7	499.2	499.2	498.7	498.2	497.7	497.1
162.5°	502.8	503.3	503.9	503.9	503.3	502.7	502.0	501.5
165°	509.5	510.1	510.8	510.7	510.0	509.2	508.4	507.6
167.5°	514.3	515.1	515.8	515.7	514.9	514.0	513.2	512.3
170°	517.2	517.9	518.7	518.6	517.6	516.8	515.9	515.1
172.5°	519.1	519.8	520.5	520.4	519.4	518.5	517.5	516.6
175°	521.3	522.1	522.9	522.7	521.7	520.6	519.6	518.6
177.5°	522.2	522.7	523.3	523.1	522.4	521.5	520.6	519.9
180°	521.7	521.7	521.7	521.7	521.7	521.7	521.7	521.7

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