

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: P332783-935

Luminaire Tested: **S124DIW-S795D770U935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332783-935
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-S795D770U935-4F0-1E-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: 5433.5 lumens
Efficiency: N/A
Efficacy: 120.7 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

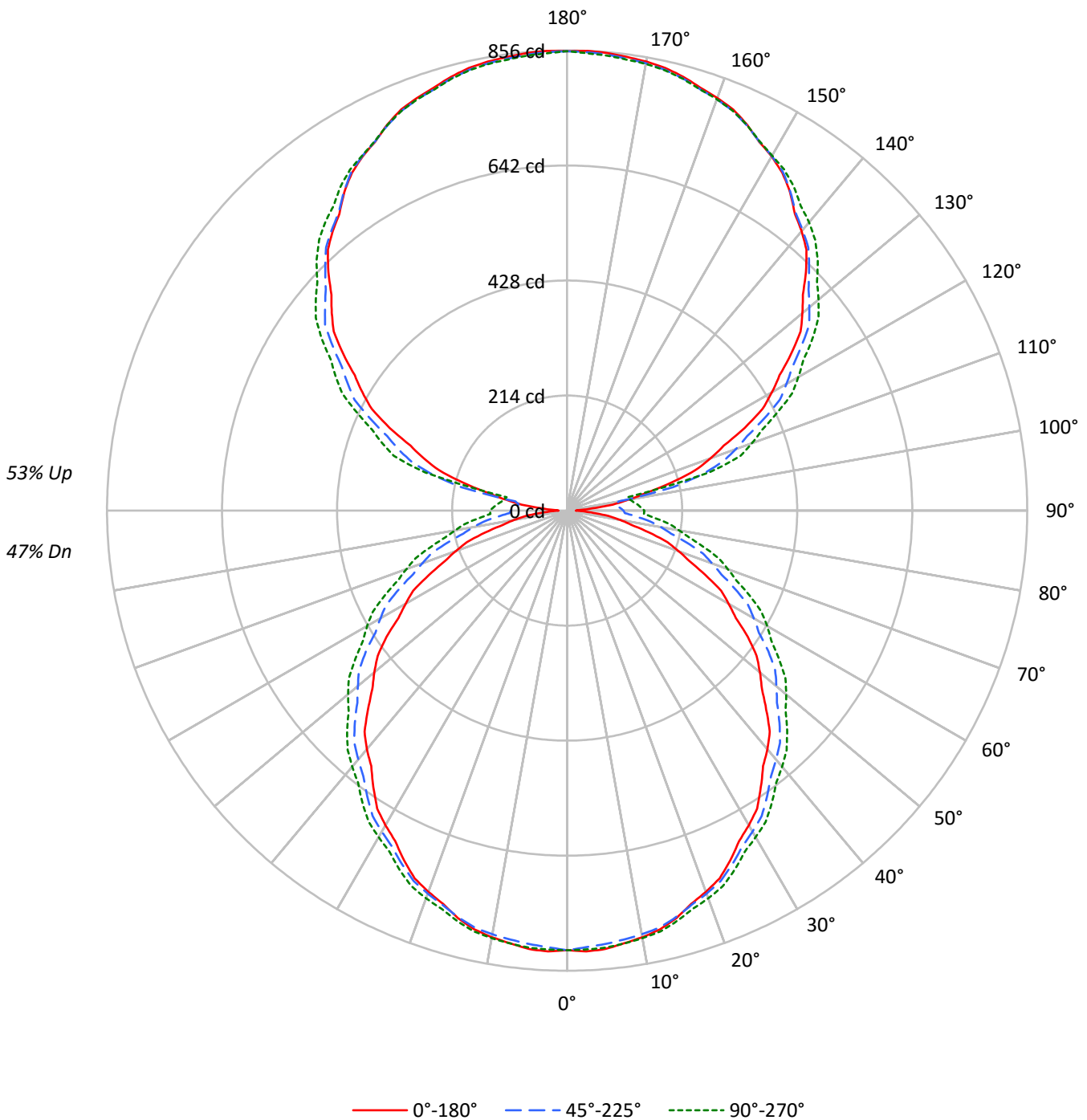
Input Watts (W): 45
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20										
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	98	98	98	98	82	82	82	67	67	67	54	54	54	47						47														
1	96	92	87	83	88	84	81	77	70	68	65	58	56	54	46	45	44	38						38														
2	87	79	73	67	80	73	67	63	61	57	53	50	47	44	40	38	36	31						31														
3	79	69	62	56	72	64	57	52	54	48	44	44	40	37	35	32	30	26						26														
4	72	61	53	47	66	56	49	44	47	42	37	39	35	31	31	28	26	22						22														
5	66	54	46	40	61	50	43	37	42	36	32	35	30	27	28	25	22	19						19														
6	61	49	40	34	56	45	37	32	38	32	28	31	27	24	25	22	19	16						16														
7	56	44	36	30	52	40	33	28	34	29	24	28	24	21	23	20	17	14						14														
8	52	40	32	26	48	37	30	25	31	26	22	26	22	18	21	18	15	13						13														
9	49	36	29	23	44	34	27	22	29	23	19	24	20	16	19	16	14	11						11														
10	45	33	26	21	42	31	24	20	26	21	17	22	18	15	18	15	12	10						10														

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	1.4
10°-20°	221.9	4.1
20°-30°	335.5	6.2
30°-40°	405.9	7.5
40°-50°	429.2	7.9
50°-60°	403.9	7.4
60°-70°	335.1	6.2
70°-80°	235.4	4.3
80°-90°	135.5	2.5
90°-100°	108.2	2.0
100°-110°	244.8	4.5
110°-120°	395.7	7.3
120°-130°	474.7	8.7
130°-140°	493.7	9.1
140°-150°	454.7	8.4
150°-160°	365.1	6.7
160°-170°	235.5	4.3
170°-180°	81.2	1.5
0°-30°	634.9	11.7
0°-40°	1040.8	19.2
0°-60°	1873.9	34.5
0°-90°	2579.9	47.5
90°-120°	748.8	13.8
90°-150°	2171.9	40.0
90°-180°	2854.0	52.5
0°-180°	5433.5	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	60	105	134	144	11
95°	47	57	94	121	131	55
105°	201	224	260	286	273	211
115°	365	376	404	424	431	359
125°	509	511	532	550	557	454
135°	628	628	636	652	659	484
145°	723	724	724	730	735	452
155°	792	792	791	793	791	365
165°	835	832	832	837	832	236
175°	854	851	851	856	849	81
180°	854	854	854	854	854	



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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°	27.5	36.1	44.7	53.4	62.0	70.9	80.0	89.1	98.2	107.4	113.5
90°	16.5	26.3	36.0	45.7	55.4	65.2	75.1	85.0	94.8	104.7	111.5
92.5°	22.0	29.4	36.8	44.2	51.7	60.3	70.2	80.1	90.0	99.8	106.4
95°	47.1	48.9	50.8	52.7	54.6	59.8	68.3	76.8	85.2	93.8	100.0
97.5°	85.5	94.3	103.1	111.8	120.6	121.2	113.7	106.1	98.5	90.8	96.3
100°	114.9	122.8	130.6	138.4	146.3	144.4	132.7	121.1	109.3	97.7	100.8
102.5°	148.6	155.2	161.7	168.2	174.7	180.6	185.8	191.0	196.2	201.4	180.7
105°	200.6	205.5	210.4	215.4	220.3	226.9	235.1	243.4	251.6	259.8	266.2
107.5°	250.4	254.2	258.0	261.7	265.4	271.4	279.5	287.6	295.7	303.8	309.4
110°	283.4	286.7	290.0	293.3	296.5	302.1	310.1	318.1	326.1	334.1	339.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	315.4	318.7	322.0	325.3	328.6	333.8	341.0	348.2	355.4	362.6	367.0
115°	364.6	367.0	369.2	371.4	373.7	378.0	384.4	390.7	397.1	403.5	408.3
117.5°	409.8	411.6	413.2	414.8	416.6	420.6	427.0	433.3	439.7	446.1	450.2
120°	439.8	441.0	442.2	443.3	444.5	448.0	453.7	459.5	465.3	471.1	475.4
122.5°	468.5	468.9	469.3	469.8	470.3	473.4	479.2	485.0	490.8	496.5	500.8
125°	508.6	508.9	509.3	509.6	510.1	512.6	517.4	522.2	527.0	531.8	536.1
127.5°	547.3	547.2	547.1	547.1	547.0	549.2	553.8	558.4	562.9	567.5	571.1
130°	571.5	571.5	571.4	571.4	571.3	573.1	576.8	580.5	584.2	587.9	591.7
132.5°	594.5	594.6	594.7	594.7	594.8	596.3	599.5	602.7	605.8	609.0	612.6
135°	628.2	628.0	627.8	627.8	627.6	628.5	630.5	632.5	634.5	636.5	640.1
137.5°	658.7	658.6	658.4	658.2	658.1	658.7	660.0	661.3	662.6	664.0	667.3
140°	678.6	678.7	678.8	678.9	679.0	679.2	679.8	680.2	680.7	681.2	684.2
142.5°	695.8	696.3	696.7	697.2	697.7	697.9	698.0	698.0	698.1	698.2	700.8
145°	723.1	723.3	723.6	723.8	724.0	724.1	724.1	724.1	724.1	724.1	725.5
147.5°	744.9	745.5	746.1	746.7	747.3	747.5	747.4	747.3	747.1	747.0	747.3
150°	760.8	761.2	761.6	761.9	762.2	762.4	762.2	762.1	762.0	761.8	761.8
152.5°	773.4	773.8	774.2	774.6	775.1	775.1	774.8	774.6	774.4	774.1	774.3
155°	791.9	792.0	792.1	792.3	792.5	792.3	791.9	791.4	791.0	790.6	791.2
157.5°	807.6	807.5	807.4	807.4	807.3	806.9	806.5	806.0	805.5	805.0	805.7
160°	816.7	816.3	816.0	815.5	815.1	814.8	814.7	814.5	814.3	814.2	815.1
162.5°	824.9	824.4	823.9	823.4	822.8	822.4	822.3	822.2	822.0	821.9	822.8
165°	835.3	834.6	833.9	833.2	832.5	832.2	832.2	832.2	832.2	832.2	833.3
167.5°	843.5	842.7	842.1	841.3	840.5	840.2	840.1	840.0	839.9	839.8	841.0
170°	848.1	847.2	846.4	845.5	844.7	844.3	844.5	844.6	844.7	844.9	846.0
172.5°	851.2	850.3	849.5	848.6	847.7	847.4	847.6	847.7	847.8	848.0	849.1
175°	854.5	853.6	852.8	852.0	851.1	850.8	850.8	851.0	851.2	851.3	852.6
177.5°	856.0	855.2	854.5	853.6	852.8	852.6	852.8	853.0	853.3	853.4	854.4
180°	854.5	854.5	854.5	854.5	854.5	854.5	854.5	854.5	854.5	854.5	854.5



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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°	119.5	125.6	131.6	135.6	137.5	139.3	141.2	143.0
90°	118.2	125.0	131.7	136.0	138.0	139.9	141.8	143.7
92.5°	113.0	119.6	126.2	130.4	132.0	133.7	135.3	137.1
95°	106.4	112.8	119.2	123.3	125.3	127.3	129.2	131.2
97.5°	101.7	107.1	112.5	116.2	118.1	119.9	121.8	123.7
100°	103.9	106.9	110.0	112.4	113.9	115.5	117.1	118.6
102.5°	160.0	139.3	118.6	109.0	110.6	112.3	113.9	115.5
105°	272.6	279.0	285.3	286.7	283.3	279.7	276.3	272.9
107.5°	315.0	320.6	326.2	330.1	332.1	334.1	336.1	338.1
110°	344.0	349.0	353.9	357.4	359.5	361.5	363.6	365.7



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CATALOG NUMBER: S124DIW-S795D770U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	371.5	376.0	380.5	383.7	385.9	388.1	390.3	392.4
115°	413.0	417.8	422.6	425.7	427.1	428.5	429.9	431.4
117.5°	454.4	458.6	462.8	465.6	467.2	468.8	470.4	471.9
120°	479.7	484.1	488.4	491.3	492.7	494.0	495.3	496.7
122.5°	505.0	509.2	513.5	516.2	517.4	518.6	519.7	520.9
125°	540.4	544.7	549.0	551.8	553.2	554.6	555.9	557.2
127.5°	574.6	578.2	581.8	584.2	585.5	586.8	588.1	589.3
130°	595.5	599.3	603.0	605.5	606.8	608.0	609.2	610.4
132.5°	616.2	619.8	623.5	625.9	627.0	628.1	629.2	630.3
135°	643.6	647.1	650.7	653.2	654.7	656.2	657.7	659.2
137.5°	670.5	673.8	677.1	679.2	680.2	681.1	682.0	682.9
140°	687.3	690.4	693.4	695.6	696.8	697.9	699.0	700.3
142.5°	703.4	706.0	708.7	710.4	711.4	712.2	713.1	713.9
145°	726.9	728.2	729.5	730.8	731.8	733.0	734.1	735.2
147.5°	747.5	747.8	748.1	748.6	749.4	750.2	751.1	751.8
150°	761.8	761.8	761.8	761.9	762.1	762.2	762.3	762.4
152.5°	774.6	774.7	775.0	775.1	775.0	774.9	774.8	774.7
155°	791.7	792.3	792.8	792.9	792.5	792.0	791.6	791.3
157.5°	806.5	807.3	808.0	808.0	807.3	806.5	805.7	805.0
160°	816.0	816.7	817.6	817.6	816.7	816.0	815.1	814.2
162.5°	823.6	824.4	825.3	825.3	824.3	823.3	822.3	821.4
165°	834.4	835.5	836.6	836.6	835.3	834.1	832.8	831.5
167.5°	842.3	843.5	844.8	844.7	843.3	841.9	840.4	839.0
170°	847.1	848.3	849.5	849.3	847.9	846.4	845.1	843.6
172.5°	850.2	851.4	852.5	852.3	850.8	849.3	847.7	846.2
175°	853.9	855.1	856.4	856.2	854.5	852.8	851.1	849.4
177.5°	855.3	856.2	857.1	856.9	855.5	854.1	852.8	851.4
180°	854.5	854.5	854.5	854.5	854.5	854.5	854.5	854.5

(END OF REPORT)