

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: P332790-830

Luminaire Tested: **S124DIW-S795D1050U830-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332790-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIW-S795D1050U830-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1050 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6480.9 lumens
Efficiency: N/A
Efficacy: 123.2 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

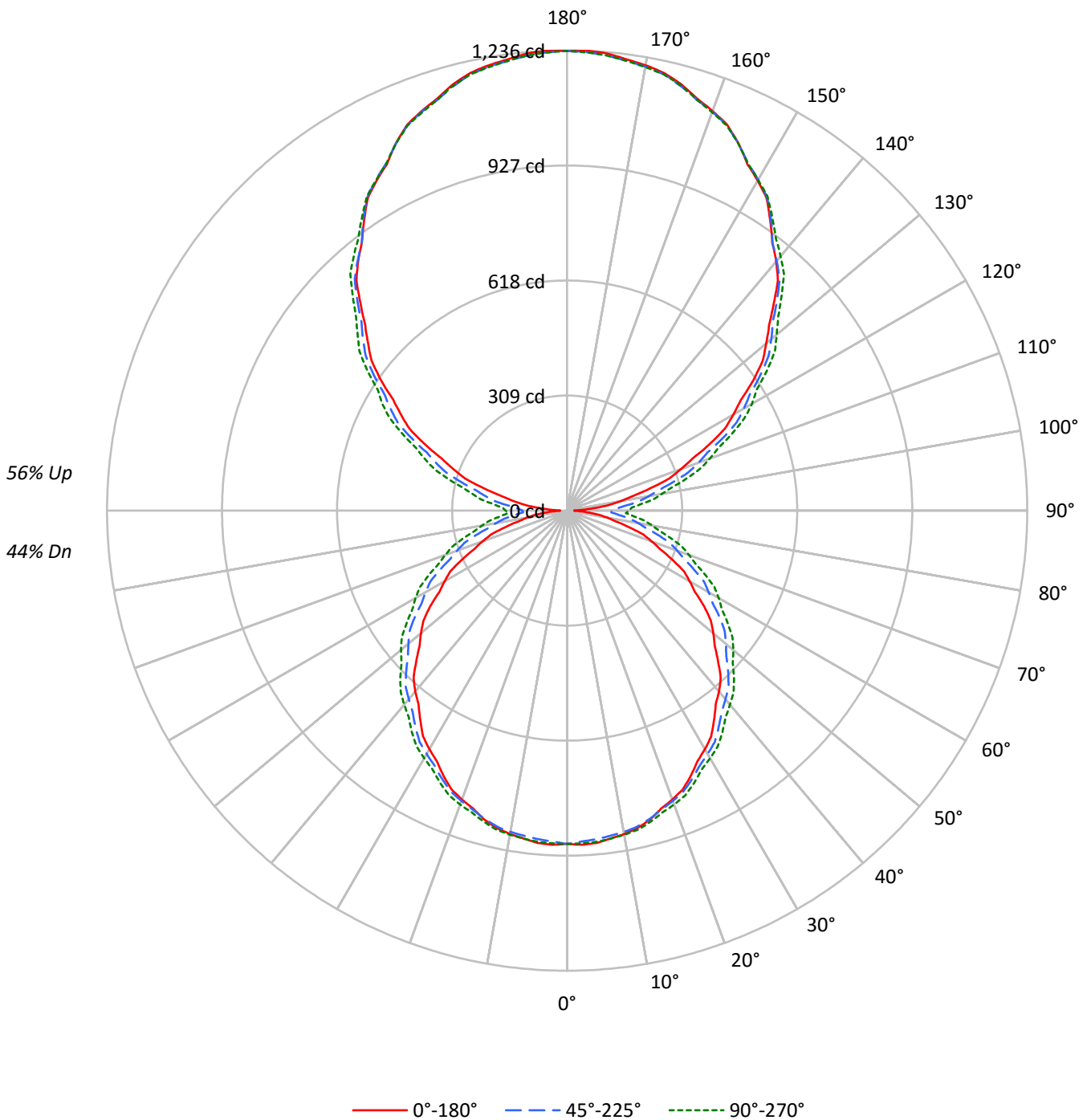
Input Watts (W): 52.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0	
RCR																						
0	106	106	106	106	97	97	97	97	80	80	80	64	64	64	50	50	50	44				
1	95	91	87	83	87	83	79	76	69	66	64	55	53	52	43	42	41	35				
2	87	79	72	67	79	72	66	62	60	55	52	48	45	42	37	35	33	28				
3	79	69	61	55	72	63	56	51	52	47	43	42	39	35	33	30	28	24				
4	72	61	53	46	65	56	49	43	46	41	36	37	33	30	29	26	24	20				
5	66	54	46	39	60	49	42	37	41	36	31	33	29	26	26	23	21	17				
6	60	48	40	34	55	44	37	32	37	31	27	30	26	23	24	20	18	15				
7	56	43	35	30	51	40	33	28	33	28	24	27	23	20	21	18	16	13				
8	52	39	31	26	47	36	29	24	30	25	21	25	21	18	20	17	14	12				
9	48	36	28	23	44	33	26	22	28	22	19	23	19	16	18	15	13	11				
10	45	33	25	21	41	30	24	19	25	20	17	21	17	14	17	14	12	10				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7228	7228	7228
5°	7250	7064	7083
10°	7205	6948	6943
15°	7141	6814	6777
20°	7044	6667	6616
25°	6934	6501	6439
30°	6815	6336	6256
35°	6681	6168	6097
40°	6573	6008	5930
45°	6413	5859	5787
50°	6278	5689	5636
55°	6138	5529	5459
60°	5920	5324	5298
65°	5683	5104	5098
70°	5394	4853	4868
75°	4992	4579	4659
80°	4540	4312	4453
85°	3980	4075	4334



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.8	1.3
10°-20°	242.9	3.7
20°-30°	367.3	5.7
30°-40°	444.4	6.9
40°-50°	469.8	7.2
50°-60°	442.2	6.8
60°-70°	366.8	5.7
70°-80°	257.7	4.0
80°-90°	149.4	2.3
90°-100°	167.9	2.6
100°-110°	305.3	4.7
110°-120°	452.4	7.0
120°-130°	564.1	8.7
130°-140°	616.8	9.5
140°-150°	597.9	9.2
150°-160°	501.1	7.7
160°-170°	333.4	5.1
170°-180°	116.7	1.8
0°-30°	695.0	10.7
0°-40°	1139.4	17.6
0°-60°	2051.4	31.7
0°-90°	2825.3	43.6
90°-120°	925.6	14.3
90°-150°	2704.4	41.7
90°-180°	3656.0	56.4
0°-180°	6480.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	895	895	895	895	895	
5°	896	893	886	894	893	85
15°	859	860	857	866	865	242
25°	786	792	795	806	807	362
35°	688	700	710	723	727	431
45°	573	593	612	628	634	443
55°	449	471	500	520	526	400
65°	311	343	377	401	410	308
75°	172	210	252	279	289	183
85°	53	95	140	169	180	57
90°	19	70	120	154	165	14
95°	70	112	160	189	199	74
105°	232	254	293	320	332	246
115°	422	433	462	482	489	417
125°	610	611	634	650	655	544
135°	784	790	797	810	814	607
145°	951	954	955	960	961	595
155°	1088	1088	1088	1091	1088	501
165°	1185	1182	1180	1185	1182	334
175°	1233	1228	1227	1233	1227	117
180°	1235	1235	1235	1235	1235	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3
2.5°	898.5	898.0	897.4	896.9	896.4	895.4	893.9	892.5	891.1	889.7	890.9
5°	896.3	895.6	894.9	894.3	893.6	892.5	890.9	889.4	887.8	886.3	888.1
7.5°	888.6	888.3	887.9	887.5	887.0	886.2	885.0	883.6	882.3	881.1	883.1
10°	882.2	882.0	881.8	881.6	881.4	880.7	879.6	878.4	877.3	876.2	878.3
12.5°	873.5	873.4	873.4	873.3	873.3	872.9	872.1	871.3	870.5	869.8	871.7
15°	859.2	859.4	859.6	859.9	860.1	859.9	859.2	858.6	857.8	857.1	859.2
17.5°	839.7	840.4	841.0	841.8	842.4	842.6	842.5	842.4	842.3	842.2	844.2
20°	826.1	826.8	827.5	828.1	828.8	829.2	829.4	829.6	829.9	830.1	832.4
22.5°	810.9	811.7	812.6	813.4	814.3	814.9	815.3	815.7	816.1	816.5	818.7
25°	786.0	787.3	788.7	790.0	791.4	792.4	793.1	793.7	794.4	795.0	797.5
27.5°	758.4	760.3	762.2	764.2	766.2	767.7	768.7	769.7	770.7	771.8	774.0
30°	739.9	741.7	743.5	745.3	747.1	748.7	750.3	751.8	753.4	754.9	757.3
32.5°	719.8	722.0	724.2	726.2	728.4	730.3	732.1	733.8	735.6	737.3	740.1
35°	687.8	690.4	693.1	695.8	698.4	700.9	703.1	705.4	707.6	709.8	712.9
37.5°	655.4	658.6	661.7	664.7	667.8	670.7	673.4	676.2	679.0	681.7	684.9
40°	634.6	637.5	640.4	643.3	646.2	649.2	652.3	655.4	658.6	661.7	665.1
42.5°	610.6	613.8	617.1	620.3	623.6	627.0	630.7	634.3	638.0	641.6	645.4
45°	573.4	577.7	581.9	586.2	590.4	594.7	598.9	603.1	607.3	611.5	615.4
47.5°	538.0	542.3	546.7	551.1	555.4	560.1	565.0	569.9	574.8	579.7	583.6
50°	512.3	517.2	522.1	527.0	531.9	536.8	541.7	546.6	551.5	556.4	560.9
52.5°	486.6	491.5	496.4	501.3	506.2	511.5	517.1	522.7	528.4	534.0	538.4
55°	449.1	453.8	458.5	463.2	467.9	473.5	480.2	486.9	493.6	500.3	504.7
57.5°	407.3	413.0	418.9	424.6	430.4	436.6	443.3	449.9	456.6	463.2	468.4
60°	379.9	385.8	391.5	397.4	403.1	409.7	417.1	424.4	431.8	439.1	444.2
62.5°	353.5	359.9	366.2	372.5	378.8	385.7	393.0	400.4	407.7	415.1	420.2
65°	310.8	317.9	325.1	332.2	339.3	346.7	354.2	361.8	369.4	376.9	382.5
67.5°	269.7	277.3	284.8	292.4	300.0	307.8	315.9	324.0	332.2	340.3	345.9
70°	241.6	249.2	256.7	264.4	271.9	279.9	288.4	296.9	305.3	313.8	319.8
72.5°	214.3	222.1	229.9	237.6	245.3	253.7	262.8	271.7	280.8	289.7	295.6
75°	172.5	180.7	188.9	197.2	205.4	214.2	223.6	232.9	242.3	251.7	257.9
77.5°	133.4	142.0	150.8	159.6	168.2	177.6	187.4	197.2	207.0	216.8	223.1
80°	109.2	118.2	127.1	136.0	145.0	154.3	164.1	173.9	183.7	193.5	200.2
82.5°	85.2	94.4	103.8	113.0	122.2	131.9	141.7	151.5	161.3	171.1	177.9
85°	53.2	62.5	71.8	81.2	90.6	100.3	110.3	120.3	130.4	140.3	147.0
87.5°	30.3	39.8	49.4	58.9	68.4	78.3	88.4	98.5	108.6	118.7	125.5
90°	18.9	30.2	41.4	52.7	63.9	75.1	86.4	97.7	109.0	120.3	128.0
92.5°	35.6	46.4	57.0	67.8	78.4	89.2	99.9	110.7	121.5	132.2	139.3
95°	70.3	79.6	88.9	98.1	107.4	117.3	127.9	138.6	149.2	159.8	166.5
97.5°	111.9	119.8	127.6	135.4	143.4	152.6	163.4	174.2	185.0	195.8	202.4
100°	144.7	151.4	158.0	164.7	171.3	179.9	190.5	201.0	211.7	222.3	228.8
102.5°	179.8	185.3	190.7	196.1	201.5	209.3	219.6	229.9	240.1	250.3	256.7
105°	231.5	236.2	240.8	245.5	250.2	257.0	266.2	275.2	284.4	293.4	299.6
107.5°	287.7	291.5	295.5	299.4	303.3	309.2	317.1	325.0	333.0	340.9	346.9
110°	325.0	328.6	332.2	335.6	339.2	344.8	352.3	360.0	367.5	375.1	379.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	363.9	366.8	369.7	372.5	375.3	380.3	387.4	394.4	401.4	408.5	413.4
115°	422.4	424.3	426.3	428.4	430.4	434.7	441.4	448.1	454.8	461.6	466.2
117.5°	478.2	479.7	481.0	482.4	483.7	487.6	494.0	500.3	506.6	513.0	516.9
120°	514.9	516.4	517.9	519.4	520.9	524.6	530.5	536.3	542.2	547.9	551.3
122.5°	553.8	554.3	554.8	555.3	555.7	558.9	564.7	570.5	576.3	582.1	585.9
125°	610.3	610.1	609.9	609.6	609.4	612.0	617.4	622.7	628.1	633.5	637.3
127.5°	662.2	662.7	663.1	663.5	663.9	666.1	670.1	674.0	677.9	681.8	685.4
130°	698.1	698.5	699.0	699.4	699.7	701.8	705.3	708.9	712.5	716.0	719.6
132.5°	735.6	735.8	736.0	736.3	736.5	738.0	740.6	743.4	746.0	748.8	752.1
135°	784.0	785.3	786.6	787.9	789.1	790.5	792.1	793.6	795.2	796.7	799.9
137.5°	837.8	838.2	838.6	839.0	839.3	840.1	841.2	842.3	843.4	844.5	847.2
140°	873.7	873.9	874.2	874.4	874.6	874.8	875.1	875.2	875.4	875.7	878.4
142.5°	905.8	906.2	906.5	906.9	907.3	907.4	907.1	906.7	906.4	906.2	908.6
145°	951.0	951.7	952.3	952.9	953.6	953.9	954.2	954.4	954.6	954.8	955.9
147.5°	996.2	996.9	997.7	998.5	999.3	999.7	999.5	999.3	999.1	998.9	999.0
150°	1023.6	1024.3	1024.9	1025.5	1026.1	1026.4	1026.4	1026.4	1026.4	1026.4	1026.4
152.5°	1048.8	1049.2	1049.7	1050.2	1050.7	1050.9	1051.1	1051.3	1051.5	1051.7	1052.2
155°	1088.5	1088.5	1088.5	1088.5	1088.5	1088.4	1088.2	1088.0	1087.8	1087.6	1088.4
157.5°	1122.1	1121.7	1121.3	1121.0	1120.6	1120.4	1120.3	1120.3	1120.2	1120.2	1120.9
160°	1142.0	1141.8	1141.5	1141.3	1141.1	1140.9	1140.7	1140.5	1140.3	1140.1	1140.7
162.5°	1160.3	1159.8	1159.2	1158.7	1158.1	1157.7	1157.5	1157.3	1157.1	1156.9	1158.0
165°	1185.0	1184.3	1183.6	1183.1	1182.4	1181.9	1181.5	1181.0	1180.6	1180.2	1181.5
167.5°	1203.8	1203.0	1202.1	1201.2	1200.3	1199.9	1200.0	1200.0	1200.0	1200.0	1201.3
170°	1214.6	1213.5	1212.4	1211.4	1210.3	1209.8	1210.1	1210.3	1210.5	1210.7	1212.0
172.5°	1222.2	1221.3	1220.4	1219.6	1218.6	1218.2	1218.2	1218.3	1218.3	1218.3	1219.8
175°	1232.7	1231.6	1230.6	1229.5	1228.4	1227.9	1227.6	1227.4	1227.2	1227.0	1228.4
177.5°	1236.1	1235.3	1234.4	1233.6	1232.8	1232.3	1232.3	1232.3	1232.3	1232.3	1233.5
180°	1234.6	1234.6	1234.6	1234.6	1234.6	1234.6	1234.6	1234.6	1234.6	1234.6	1234.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3
2.5°	892.1	893.4	894.7	895.2	895.0	894.8	894.7	894.5
5°	889.9	891.6	893.3	894.2	893.9	893.7	893.5	893.2
7.5°	885.0	887.0	889.1	889.9	889.8	889.5	889.3	889.1
10°	880.2	882.2	884.3	885.1	885.0	884.7	884.5	884.3
12.5°	873.5	875.3	877.1	878.0	878.0	877.9	877.9	877.8
15°	861.2	863.2	865.2	866.1	865.9	865.6	865.4	865.2
17.5°	846.2	848.3	850.4	851.3	851.1	850.9	850.7	850.6
20°	834.5	836.8	839.1	840.2	840.2	840.2	840.2	840.2
22.5°	821.0	823.1	825.4	826.7	827.1	827.4	827.7	828.1
25°	799.9	802.4	804.8	806.2	806.3	806.6	806.8	807.1
27.5°	776.3	778.5	780.9	782.1	782.4	782.7	783.0	783.2
30°	759.8	762.2	764.7	766.2	766.7	767.0	767.5	768.0
32.5°	742.9	745.7	748.5	750.2	750.5	751.0	751.5	752.0
35°	716.0	719.2	722.3	724.2	724.8	725.5	726.2	726.9
37.5°	688.1	691.3	694.4	696.4	697.0	697.8	698.4	699.2
40°	668.4	671.8	675.0	677.1	678.1	678.9	679.9	680.7
42.5°	649.0	652.7	656.4	658.6	659.3	660.1	660.8	661.5
45°	619.2	622.9	626.7	629.1	630.3	631.4	632.5	633.6
47.5°	587.5	591.4	595.4	597.9	599.4	600.7	602.0	603.3
50°	565.3	569.8	574.2	577.1	578.4	579.9	581.2	582.5
52.5°	542.9	547.3	551.8	554.7	556.0	557.3	558.6	560.1
55°	509.2	513.7	518.1	521.0	522.4	523.7	525.0	526.3
57.5°	473.8	479.1	484.4	487.7	488.9	490.1	491.4	492.7
60°	449.4	454.5	459.6	463.1	464.9	466.7	468.4	470.2
62.5°	425.3	430.5	435.5	439.0	440.8	442.6	444.3	446.1
65°	388.1	393.7	399.3	402.9	404.7	406.5	408.2	410.0
67.5°	351.6	357.2	362.9	366.6	368.3	370.0	371.8	373.5
70°	325.8	331.9	337.9	341.7	343.2	344.8	346.3	347.9
72.5°	301.4	307.3	313.1	316.9	318.6	320.4	322.1	323.9
75°	264.1	270.3	276.6	280.7	282.8	284.7	286.7	288.7
77.5°	229.4	235.7	242.0	246.3	248.5	250.5	252.7	254.9
80°	206.9	213.6	220.3	224.4	226.2	228.0	229.8	231.6
82.5°	184.7	191.6	198.5	202.9	204.8	206.8	208.8	210.8
85°	153.7	160.4	167.1	171.5	173.8	176.0	178.2	180.5
87.5°	132.1	138.8	145.5	150.0	151.9	154.0	156.1	158.2
90°	135.7	143.5	151.2	156.2	158.3	160.6	162.8	165.0
92.5°	146.4	153.4	160.4	164.9	167.0	169.1	171.1	173.1
95°	173.1	179.7	186.4	190.8	192.7	194.7	196.7	198.8
97.5°	209.0	215.6	222.2	226.4	228.4	230.3	232.1	234.1
100°	235.2	241.6	248.1	252.0	253.6	255.1	256.7	258.3
102.5°	263.3	269.7	276.1	280.2	282.2	284.1	286.0	287.9
105°	305.9	312.1	318.2	322.5	325.0	327.4	329.8	332.2
107.5°	353.1	359.1	365.1	369.0	370.6	372.1	373.7	375.2
110°	384.5	389.2	393.9	397.5	399.9	402.3	404.7	407.2



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CATALOG NUMBER: S124DIW-S795D1050U830-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	418.2	423.1	428.0	431.4	433.3	435.2	437.1	439.0
115°	470.9	475.6	480.3	483.3	484.7	486.0	487.3	488.7
117.5°	520.8	524.7	528.7	531.3	532.6	534.0	535.4	536.7
120°	554.7	558.1	561.5	564.3	566.6	568.7	570.9	573.2
122.5°	589.6	593.3	597.0	599.4	600.2	601.1	601.8	602.7
125°	641.0	644.9	648.7	651.0	652.0	652.9	653.7	654.7
127.5°	689.0	692.6	696.2	698.6	699.7	701.0	702.1	703.2
130°	723.2	726.8	730.4	732.4	732.9	733.4	733.9	734.3
132.5°	755.5	758.9	762.3	764.6	765.5	766.6	767.5	768.5
135°	803.0	806.2	809.4	811.2	811.9	812.7	813.3	814.1
137.5°	849.9	852.6	855.3	857.2	858.5	859.7	861.0	862.2
140°	881.1	883.7	886.5	888.3	889.1	890.0	890.9	891.8
142.5°	911.2	913.6	916.2	917.8	918.7	919.6	920.5	921.4
145°	957.1	958.2	959.3	960.0	960.3	960.5	960.8	961.0
147.5°	999.0	999.0	999.0	999.3	999.8	1000.2	1000.7	1001.3
150°	1026.4	1026.4	1026.4	1026.3	1026.1	1026.0	1025.7	1025.5
152.5°	1052.6	1053.2	1053.7	1053.7	1053.1	1052.5	1052.0	1051.5
155°	1089.3	1090.1	1091.0	1091.0	1090.1	1089.3	1088.4	1087.6
157.5°	1121.5	1122.1	1122.8	1122.8	1122.0	1121.2	1120.6	1119.8
160°	1141.3	1142.0	1142.6	1142.4	1141.3	1140.3	1139.3	1138.1
162.5°	1159.1	1160.3	1161.5	1161.5	1160.5	1159.4	1158.3	1157.3
165°	1182.7	1184.0	1185.2	1185.4	1184.6	1183.7	1182.9	1182.0
167.5°	1202.6	1203.8	1205.1	1205.1	1203.8	1202.5	1201.2	1199.9
170°	1213.2	1214.6	1215.8	1215.7	1214.3	1212.8	1211.3	1209.8
172.5°	1221.3	1222.7	1224.2	1224.1	1222.7	1221.2	1219.7	1218.1
175°	1229.9	1231.4	1232.9	1232.9	1231.4	1229.9	1228.4	1227.0
177.5°	1234.7	1235.9	1237.1	1237.0	1235.6	1234.3	1232.9	1231.5
180°	1234.6	1234.6	1234.6	1234.6	1234.6	1234.6	1234.6	1234.6

(END OF REPORT)