

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: P332790-927

Luminaire Tested: **S124DIW-S795D1050U927-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332790-927  
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-S795D1050U927-4F0-1E-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**

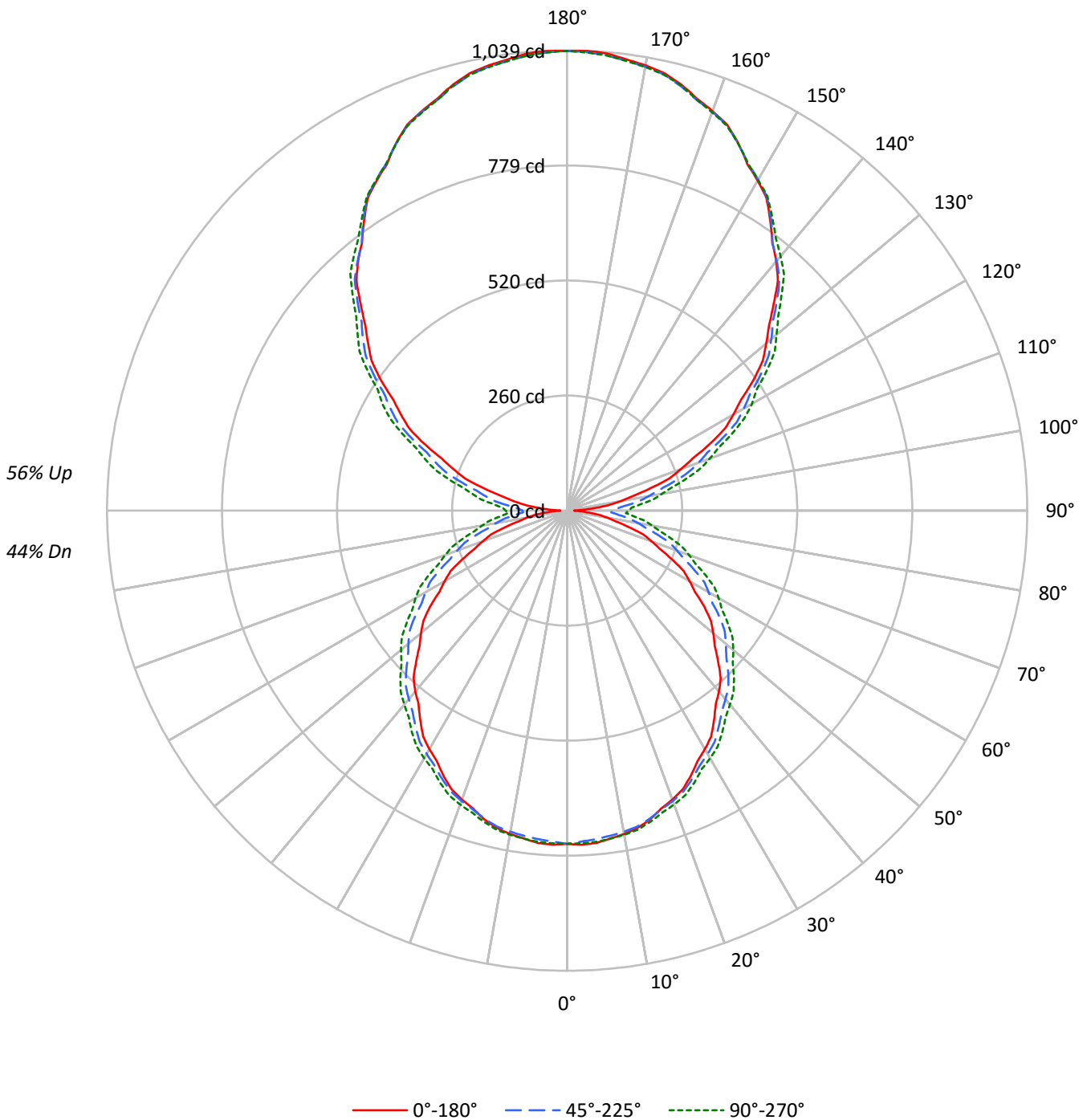
Lumens per Lamp: N/A  
Luminaire Lumens: 5447.0 lumens  
Efficiency: N/A  
Efficacy: 103.6 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')  
CIE Type: General Diffuse  
  
Input Watts (W): 52.6  
Input Voltage (V): 120  
Input Current (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	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°	6075	6075	6075
5°	6093	5937	5954
10°	6056	5839	5835
15°	6002	5727	5695
20°	5920	5603	5561
25°	5828	5464	5411
30°	5728	5326	5258
35°	5615	5184	5124
40°	5525	5049	4984
45°	5391	4925	4864
50°	5277	4781	4738
55°	5160	4647	4588
60°	4976	4475	4453
65°	4776	4290	4285
70°	4532	4078	4091
75°	4196	3847	3915
80°	3817	3624	3742
85°	3344	3427	3643



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	71.3	1.3
10°-20°	204.2	3.7
20°-30°	308.7	5.7
30°-40°	373.5	6.9
40°-50°	394.9	7.2
50°-60°	371.6	6.8
60°-70°	308.3	5.7
70°-80°	216.6	4.0
80°-90°	125.5	2.3
90°-100°	141.1	2.6
100°-110°	256.6	4.7
110°-120°	380.2	7.0
120°-130°	474.1	8.7
130°-140°	518.4	9.5
140°-150°	502.5	9.2
150°-160°	421.2	7.7
160°-170°	280.2	5.1
170°-180°	98.1	1.8
0°-30°	584.1	10.7
0°-40°	957.6	17.6
0°-60°	1724.1	31.7
0°-90°	2374.6	43.6
90°-120°	777.9	14.3
90°-150°	2273.0	41.7
90°-180°	3072.0	56.4
0°-180°	5447.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	752	752	752	752	752	
5°	753	751	745	751	751	71
15°	722	723	720	728	727	203
25°	661	666	668	677	678	304
35°	578	588	597	608	611	362
45°	482	498	514	528	532	372
55°	378	396	420	437	442	336
65°	261	288	317	337	345	259
75°	145	176	212	234	243	154
85°	45	80	118	142	152	48
90°	16	58	101	129	139	12
95°	59	94	134	158	167	62
105°	195	213	247	269	279	207
115°	355	364	388	405	411	350
125°	513	513	532	546	550	457
135°	659	664	670	681	684	510
145°	799	802	802	807	808	500
155°	915	915	914	917	914	421
165°	996	994	992	996	994	281
175°	1036	1032	1031	1036	1031	98
180°	1038	1038	1038	1038	1038	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	752.5	752.5	752.5	752.5	752.5	752.5	752.5	752.5	752.5	752.5	752.5
2.5°	755.2	754.7	754.2	753.8	753.4	752.6	751.3	750.1	748.9	747.7	748.8
5°	753.3	752.7	752.2	751.6	751.1	750.1	748.8	747.5	746.2	744.9	746.4
7.5°	746.9	746.6	746.2	745.9	745.5	744.8	743.8	742.7	741.6	740.5	742.2
10°	741.5	741.3	741.2	740.9	740.8	740.2	739.3	738.3	737.4	736.4	738.2
12.5°	734.1	734.0	734.0	734.0	734.0	733.6	733.0	732.3	731.7	731.0	732.6
15°	722.2	722.3	722.5	722.7	722.9	722.7	722.2	721.6	721.0	720.4	722.2
17.5°	705.8	706.3	706.9	707.5	708.1	708.2	708.1	708.1	707.9	707.8	709.6
20°	694.3	694.9	695.5	696.0	696.6	697.0	697.1	697.3	697.5	697.7	699.6
22.5°	681.5	682.2	682.9	683.7	684.4	684.9	685.2	685.6	685.9	686.3	688.1
25°	660.6	661.7	662.9	664.0	665.1	666.0	666.5	667.1	667.7	668.2	670.3
27.5°	637.4	639.0	640.6	642.3	644.0	645.2	646.1	646.9	647.8	648.6	650.5
30°	621.9	623.4	624.9	626.4	627.9	629.2	630.6	631.8	633.2	634.5	636.5
32.5°	605.0	606.8	608.6	610.4	612.2	613.8	615.3	616.7	618.2	619.6	622.0
35°	578.1	580.3	582.6	584.8	587.0	589.1	591.0	592.9	594.7	596.6	599.2
37.5°	550.9	553.5	556.1	558.6	561.3	563.7	566.0	568.3	570.7	573.0	575.7
40°	533.4	535.8	538.2	540.7	543.1	545.7	548.3	550.9	553.5	556.1	559.0
42.5°	513.2	515.9	518.6	521.3	524.1	527.0	530.0	533.1	536.2	539.2	542.4
45°	482.0	485.5	489.1	492.7	496.2	499.8	503.4	506.9	510.4	514.0	517.2
47.5°	452.2	455.8	459.5	463.2	466.8	470.7	474.8	479.0	483.1	487.2	490.5
50°	430.6	434.7	438.8	442.9	447.0	451.1	455.3	459.4	463.5	467.6	471.4
52.5°	409.0	413.1	417.2	421.4	425.5	429.9	434.6	439.3	444.1	448.8	452.5
55°	377.5	381.4	385.4	389.3	393.2	398.0	403.6	409.2	414.9	420.5	424.2
57.5°	342.3	347.1	352.0	356.9	361.7	366.9	372.6	378.1	383.7	389.3	393.7
60°	319.3	324.2	329.1	334.0	338.8	344.4	350.5	356.7	362.9	369.1	373.4
62.5°	297.1	302.5	307.8	313.1	318.4	324.2	330.3	336.5	342.7	348.9	353.2
65°	261.2	267.2	273.2	279.2	285.2	291.4	297.7	304.1	310.5	316.8	321.5
67.5°	226.6	233.1	239.4	245.7	252.2	258.7	265.5	272.4	279.2	286.0	290.7
70°	203.0	209.5	215.8	222.2	228.5	235.3	242.4	249.5	256.6	263.7	268.8
72.5°	180.1	186.6	193.2	199.7	206.2	213.3	220.9	228.4	236.0	243.5	248.4
75°	145.0	151.9	158.8	165.7	172.6	180.1	187.9	195.7	203.7	211.5	216.7
77.5°	112.1	119.4	126.7	134.1	141.4	149.2	157.5	165.7	174.0	182.2	187.5
80°	91.8	99.3	106.8	114.3	121.8	129.7	137.9	146.2	154.4	162.6	168.3
82.5°	71.6	79.4	87.2	95.0	102.7	110.8	119.1	127.3	135.5	143.8	149.5
85°	44.7	52.5	60.4	68.3	76.1	84.3	92.7	101.1	109.6	118.0	123.6
87.5°	25.4	33.4	41.5	49.5	57.5	65.8	74.3	82.8	91.3	99.7	105.4
90°	15.9	25.3	34.8	44.3	53.7	63.1	72.6	82.1	91.6	101.1	107.6
92.5°	29.9	39.0	47.9	57.0	65.9	74.9	84.0	93.1	102.1	111.1	117.1
95°	59.1	66.9	74.7	82.5	90.2	98.6	107.5	116.5	125.4	134.3	139.9
97.5°	94.0	100.7	107.3	113.8	120.5	128.3	137.4	146.4	155.5	164.5	170.1
100°	121.6	127.2	132.8	138.4	143.9	151.2	160.1	169.0	177.9	186.8	192.3
102.5°	151.1	155.7	160.3	164.9	169.4	175.9	184.6	193.2	201.8	210.4	215.8
105°	194.6	198.5	202.4	206.4	210.2	216.0	223.7	231.3	239.0	246.6	251.8
107.5°	241.8	245.0	248.3	251.6	254.9	259.8	266.5	273.1	279.9	286.5	291.6
110°	273.1	276.2	279.2	282.1	285.1	289.8	296.1	302.5	308.9	315.3	319.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	305.9	308.3	310.7	313.1	315.4	319.6	325.6	331.4	337.4	343.3	347.5
115°	355.0	356.6	358.3	360.0	361.7	365.4	371.0	376.6	382.2	387.9	391.8
117.5°	402.0	403.1	404.3	405.4	406.5	409.8	415.2	420.5	425.8	431.2	434.4
120°	432.8	434.0	435.3	436.6	437.8	440.9	445.8	450.8	455.7	460.5	463.3
122.5°	465.5	465.9	466.3	466.7	467.1	469.8	474.6	479.5	484.3	489.3	492.4
125°	512.9	512.8	512.6	512.4	512.2	514.4	518.9	523.4	527.9	532.4	535.6
127.5°	556.6	557.0	557.3	557.7	558.0	559.8	563.2	566.5	569.7	573.1	576.1
130°	586.8	587.1	587.5	587.8	588.1	589.9	592.8	595.8	598.8	601.8	604.8
132.5°	618.2	618.5	618.6	618.9	619.0	620.3	622.5	624.8	627.0	629.3	632.2
135°	658.9	660.0	661.1	662.2	663.2	664.4	665.7	667.0	668.4	669.6	672.3
137.5°	704.2	704.5	704.8	705.1	705.4	706.1	707.0	707.9	708.8	709.8	712.0
140°	734.4	734.5	734.7	734.9	735.1	735.2	735.5	735.6	735.8	736.0	738.2
142.5°	761.3	761.6	761.9	762.2	762.6	762.6	762.4	762.1	761.8	761.6	763.7
145°	799.3	799.9	800.4	800.9	801.5	801.8	802.0	802.2	802.3	802.5	803.4
147.5°	837.3	837.9	838.5	839.2	839.9	840.2	840.0	839.9	839.7	839.6	839.6
150°	860.3	860.9	861.4	861.9	862.4	862.7	862.7	862.7	862.7	862.7	862.7
152.5°	881.5	881.9	882.3	882.6	883.0	883.3	883.4	883.6	883.8	883.9	884.3
155°	914.9	914.9	914.9	914.9	914.9	914.8	914.6	914.4	914.3	914.1	914.8
157.5°	943.1	942.8	942.5	942.1	941.8	941.7	941.6	941.6	941.5	941.5	942.1
160°	959.8	959.6	959.4	959.3	959.1	958.9	958.7	958.5	958.4	958.2	958.7
162.5°	975.2	974.8	974.3	973.8	973.4	973.0	972.9	972.7	972.5	972.3	973.3
165°	995.9	995.4	994.8	994.3	993.8	993.3	993.0	992.6	992.3	991.9	993.0
167.5°	1011.8	1011.1	1010.3	1009.6	1008.8	1008.4	1008.5	1008.5	1008.5	1008.6	1009.6
170°	1020.8	1019.9	1019.0	1018.1	1017.2	1016.8	1017.1	1017.2	1017.4	1017.6	1018.7
172.5°	1027.2	1026.4	1025.7	1025.0	1024.2	1023.9	1023.9	1024.0	1024.0	1024.0	1025.2
175°	1036.0	1035.1	1034.3	1033.4	1032.5	1032.0	1031.7	1031.6	1031.4	1031.3	1032.5
177.5°	1038.9	1038.2	1037.5	1036.8	1036.1	1035.7	1035.7	1035.7	1035.7	1035.7	1036.7
180°	1037.7	1037.7	1037.7	1037.7	1037.7	1037.7	1037.7	1037.7	1037.7	1037.7	1037.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	752.5	752.5	752.5	752.5	752.5	752.5	752.5	752.5
2.5°	749.8	750.9	751.9	752.4	752.3	752.1	751.9	751.8
5°	747.9	749.4	750.8	751.5	751.3	751.1	751.0	750.8
7.5°	743.9	745.5	747.3	748.0	747.8	747.6	747.4	747.3
10°	739.8	741.5	743.2	743.9	743.8	743.5	743.4	743.2
12.5°	734.1	735.7	737.2	737.9	737.9	737.8	737.8	737.8
15°	723.8	725.5	727.1	727.9	727.8	727.5	727.4	727.1
17.5°	711.2	713.0	714.7	715.5	715.3	715.2	715.0	714.9
20°	701.4	703.3	705.2	706.2	706.2	706.2	706.2	706.2
22.5°	690.0	691.8	693.7	694.8	695.1	695.4	695.7	696.0
25°	672.3	674.4	676.4	677.6	677.7	677.9	678.1	678.3
27.5°	652.4	654.3	656.3	657.4	657.6	657.8	658.1	658.2
30°	638.6	640.6	642.7	644.0	644.4	644.7	645.1	645.5
32.5°	624.4	626.8	629.1	630.5	630.8	631.2	631.6	632.0
35°	601.8	604.4	607.0	608.6	609.2	609.7	610.4	610.9
37.5°	578.3	581.0	583.6	585.3	585.8	586.5	587.0	587.6
40°	561.7	564.6	567.4	569.1	569.9	570.6	571.4	572.1
42.5°	545.5	548.6	551.7	553.6	554.1	554.8	555.4	556.0
45°	520.4	523.6	526.7	528.8	529.7	530.7	531.6	532.5
47.5°	493.8	497.1	500.4	502.6	503.7	504.9	506.0	507.1
50°	475.2	478.9	482.6	485.1	486.2	487.4	488.5	489.6
52.5°	456.3	460.0	463.7	466.2	467.3	468.4	469.5	470.7
55°	427.9	431.7	435.5	437.9	439.0	440.1	441.2	442.4
57.5°	398.2	402.7	407.1	409.9	410.9	411.9	413.0	414.1
60°	377.7	382.0	386.3	389.2	390.7	392.2	393.7	395.2
62.5°	357.4	361.8	366.1	369.0	370.5	372.0	373.4	374.9
65°	326.2	330.9	335.6	338.7	340.2	341.7	343.1	344.6
67.5°	295.5	300.2	305.0	308.1	309.6	311.0	312.5	313.9
70°	273.9	278.9	284.0	287.2	288.4	289.8	291.0	292.4
72.5°	253.3	258.3	263.2	266.3	267.8	269.3	270.7	272.2
75°	222.0	227.2	232.5	235.9	237.7	239.3	241.0	242.6
77.5°	192.8	198.1	203.4	207.0	208.8	210.6	212.4	214.2
80°	173.9	179.5	185.1	188.6	190.1	191.6	193.1	194.6
82.5°	155.3	161.1	166.8	170.6	172.1	173.8	175.5	177.1
85°	129.2	134.8	140.5	144.2	146.1	147.9	149.8	151.7
87.5°	111.1	116.7	122.3	126.0	127.7	129.4	131.2	132.9
90°	114.1	120.6	127.1	131.3	133.1	135.0	136.8	138.7
92.5°	123.0	128.9	134.8	138.6	140.4	142.1	143.8	145.5
95°	145.4	151.1	156.7	160.3	162.0	163.7	165.3	167.1
97.5°	175.6	181.2	186.7	190.3	191.9	193.5	195.1	196.8
100°	197.6	203.0	208.5	211.8	213.2	214.4	215.8	217.1
102.5°	221.3	226.6	232.0	235.5	237.2	238.8	240.3	241.9
105°	257.1	262.3	267.4	271.1	273.1	275.2	277.2	279.2
107.5°	296.8	301.8	306.9	310.1	311.5	312.8	314.1	315.4
110°	323.1	327.1	331.1	334.1	336.1	338.1	340.2	342.2





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CATALOG NUMBER: S124DIW-S795D1050U927-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	351.5	355.6	359.7	362.6	364.2	365.8	367.3	369.0
115°	395.8	399.7	403.7	406.2	407.3	408.4	409.6	410.7
117.5°	437.8	441.0	444.3	446.6	447.7	448.8	450.0	451.1
120°	466.2	469.1	471.9	474.3	476.2	478.0	479.8	481.7
122.5°	495.5	498.7	501.8	503.7	504.5	505.2	505.8	506.5
125°	538.8	542.0	545.2	547.2	548.0	548.7	549.5	550.2
127.5°	579.1	582.1	585.1	587.2	588.1	589.1	590.1	591.0
130°	607.8	610.9	613.9	615.6	616.0	616.4	616.8	617.2
132.5°	635.0	637.9	640.7	642.6	643.4	644.3	645.1	645.9
135°	674.9	677.6	680.2	681.8	682.4	683.0	683.6	684.2
137.5°	714.3	716.6	718.8	720.5	721.5	722.5	723.7	724.7
140°	740.5	742.8	745.0	746.6	747.3	748.1	748.8	749.6
142.5°	765.8	767.9	770.0	771.4	772.1	772.9	773.6	774.4
145°	804.4	805.3	806.3	806.8	807.1	807.3	807.6	807.7
147.5°	839.6	839.6	839.6	839.9	840.3	840.7	841.1	841.5
150°	862.7	862.7	862.7	862.6	862.4	862.3	862.1	861.9
152.5°	884.7	885.2	885.6	885.6	885.1	884.6	884.2	883.8
155°	915.5	916.2	917.0	917.0	916.2	915.5	914.8	914.1
157.5°	942.6	943.1	943.6	943.6	943.0	942.4	941.8	941.2
160°	959.3	959.8	960.4	960.1	959.3	958.4	957.5	956.6
162.5°	974.2	975.2	976.2	976.2	975.3	974.5	973.5	972.6
165°	994.0	995.1	996.2	996.3	995.6	994.9	994.2	993.5
167.5°	1010.7	1011.8	1012.9	1012.9	1011.8	1010.7	1009.6	1008.4
170°	1019.7	1020.8	1021.8	1021.8	1020.6	1019.3	1018.0	1016.8
172.5°	1026.4	1027.6	1028.9	1028.8	1027.6	1026.4	1025.1	1023.8
175°	1033.7	1035.0	1036.3	1036.3	1035.0	1033.7	1032.5	1031.3
177.5°	1037.8	1038.7	1039.7	1039.7	1038.5	1037.4	1036.3	1035.1
180°	1037.7	1037.7	1037.7	1037.7	1037.7	1037.7	1037.7	1037.7

(END OF REPORT)