

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: P332592-830

Luminaire Tested: **S124DIP-S795D590U830-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332592-830  
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: S124DIP-S795D590U830-4F0-1E-UDD-D  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 590 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5277.6 lumens  
Efficiency: N/A  
Efficacy: 131.0 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

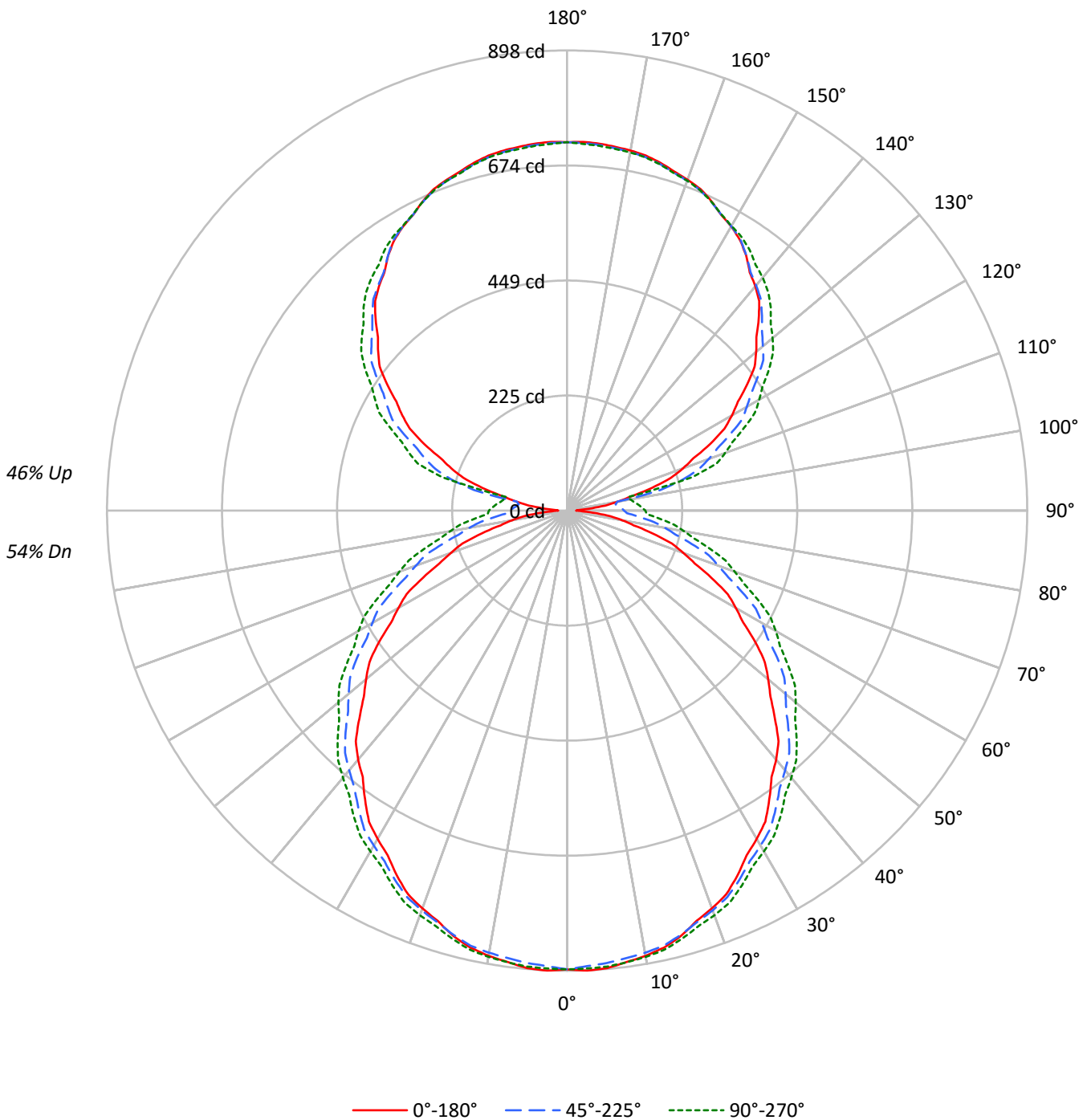
Input Watts (W): 40.3  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	108	108	108	108	100	100	100	100	85	85	85	72	72	72	59	59	59	54
1	97	93	88	84	90	86	82	79	73	70	68	61	59	58	51	49	48	43
2	88	80	74	68	81	74	69	64	63	59	55	53	50	47	44	42	40	35
3	80	70	62	56	74	65	58	53	56	50	46	47	43	39	39	36	33	29
4	73	62	54	47	67	57	50	44	49	43	39	41	37	33	34	31	28	25
5	67	55	46	40	62	51	44	38	44	38	33	37	32	29	31	27	24	21
6	62	49	41	35	57	46	38	33	39	33	29	33	29	25	28	24	21	18
7	57	44	36	30	53	41	34	29	36	30	25	30	26	22	25	22	19	16
8	53	40	32	27	49	38	30	25	32	27	22	28	23	20	23	20	17	14
9	49	37	29	24	45	34	27	22	30	24	20	25	21	18	21	18	15	13
10	46	34	26	21	43	31	25	20	27	22	18	23	19	16	20	16	14	12

**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	1.6
10°-20°	242.9	4.6
20°-30°	367.3	7.0
30°-40°	444.4	8.4
40°-50°	469.8	8.9
50°-60°	442.2	8.4
60°-70°	366.8	7.0
70°-80°	257.7	4.9
80°-90°	147.8	2.8
90°-100°	111.1	2.1
100°-110°	220.8	4.2
110°-120°	342.9	6.5
120°-130°	404.9	7.7
130°-140°	417.8	7.9
140°-150°	383.0	7.3
150°-160°	307.2	5.8
160°-170°	198.1	3.8
170°-180°	68.3	1.3
0°-30°	695.0	13.2
0°-40°	1139.4	21.6
0°-60°	2051.4	38.9
0°-90°	2823.6	53.5
90°-120°	674.7	12.8
90°-150°	1880.4	35.6
90°-180°	2454.0	46.5
0°-180°	5277.6	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°	18	64	111	142	152	12
95°	43	59	99	128	139	48
105°	171	195	234	262	252	180
115°	308	320	350	373	380	304
125°	429	431	454	474	481	383
135°	529	529	538	554	562	408
145°	608	609	609	616	621	380
155°	666	667	665	667	666	307
165°	703	700	700	704	700	198
175°	719	716	716	720	714	68
180°	719	719	719	719	719	



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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°	30.0	39.3	48.7	58.1	67.4	77.1	87.0	97.0	106.9	116.9	123.5
90°	17.6	27.9	38.1	48.4	58.5	68.9	79.5	90.0	100.6	111.1	118.3
92.5°	22.1	30.1	38.2	46.3	54.4	63.7	74.3	84.7	95.3	105.8	112.8
95°	42.6	45.9	49.2	52.5	55.8	62.0	71.3	80.6	89.8	99.1	105.8
97.5°	74.6	83.5	92.4	101.2	110.1	112.4	108.1	103.8	99.5	95.2	101.1
100°	99.2	107.2	115.1	123.0	131.0	131.0	123.3	115.5	107.6	99.8	103.9
102.5°	127.6	134.2	140.9	147.6	154.2	160.7	167.1	173.4	179.8	186.2	170.1
105°	170.9	176.1	181.2	186.3	191.5	198.6	207.4	216.2	225.1	233.9	240.5
107.5°	212.7	216.7	220.7	224.7	228.8	235.1	243.6	252.3	260.9	269.5	275.5
110°	240.3	243.7	247.2	250.7	254.2	260.2	268.7	277.2	285.8	294.3	299.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	267.0	270.4	273.8	277.2	280.7	286.3	294.0	301.8	309.5	317.4	322.3
115°	308.2	310.6	312.9	315.3	317.6	322.3	329.3	336.3	343.4	350.3	355.5
117.5°	346.1	347.8	349.5	351.2	352.9	357.1	364.1	371.0	377.9	384.7	389.4
120°	371.2	372.3	373.4	374.6	375.7	379.5	385.8	392.2	398.5	404.8	409.5
122.5°	395.2	395.7	396.1	396.5	396.9	400.3	406.5	412.8	419.1	425.4	430.0
125°	428.8	429.0	429.2	429.5	429.8	432.5	437.9	443.2	448.6	453.9	458.5
127.5°	461.3	461.2	461.0	460.9	460.8	463.2	468.0	472.9	477.7	482.5	486.4
130°	481.5	481.5	481.4	481.2	481.1	483.1	486.9	490.9	494.7	498.7	502.8
132.5°	500.9	500.9	500.9	500.9	500.9	502.5	505.8	509.1	512.4	515.8	519.6
135°	528.9	528.8	528.7	528.6	528.4	529.4	531.4	533.5	535.5	537.5	541.3
137.5°	554.6	554.4	554.2	554.1	553.9	554.5	555.7	557.0	558.3	559.6	563.1
140°	571.4	571.4	571.4	571.5	571.5	571.7	572.1	572.6	573.1	573.5	576.7
142.5°	585.6	586.0	586.4	586.8	587.2	587.4	587.4	587.4	587.4	587.4	590.2
145°	608.5	608.7	608.8	609.0	609.1	609.2	609.2	609.2	609.2	609.2	610.6
147.5°	627.0	627.4	627.8	628.3	628.7	628.9	628.8	628.7	628.5	628.4	628.7
150°	640.3	640.6	640.7	641.0	641.3	641.4	641.2	641.1	641.0	640.8	640.8
152.5°	650.6	651.0	651.3	651.7	652.0	652.1	651.9	651.7	651.4	651.2	651.4
155°	666.2	666.3	666.4	666.5	666.7	666.5	666.2	665.8	665.4	665.1	665.5
157.5°	679.4	679.3	679.2	679.2	679.1	678.8	678.4	678.1	677.6	677.2	677.9
160°	687.1	686.7	686.4	686.1	685.7	685.4	685.3	685.2	685.0	684.9	685.7
162.5°	694.0	693.5	693.1	692.7	692.2	691.9	691.7	691.6	691.5	691.4	692.1
165°	702.7	702.1	701.5	700.9	700.3	700.0	700.0	700.0	700.0	700.0	701.0
167.5°	709.5	709.0	708.3	707.8	707.1	706.7	706.7	706.6	706.5	706.4	707.6
170°	713.5	712.8	712.0	711.3	710.6	710.3	710.4	710.5	710.7	710.8	711.7
172.5°	716.0	715.3	714.6	713.9	713.2	712.8	713.0	713.1	713.2	713.3	714.4
175°	718.9	718.1	717.4	716.7	716.0	715.7	715.8	716.0	716.0	716.1	717.2
177.5°	720.1	719.4	718.8	718.1	717.5	717.2	717.4	717.6	717.7	717.9	718.8
180°	718.9	718.9	718.9	718.9	718.9	718.9	718.9	718.9	718.9	718.9	718.9



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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°	130.1	136.7	143.3	147.6	149.6	151.6	153.6	155.6
90°	125.5	132.6	139.8	144.4	146.4	148.5	150.4	152.5
92.5°	119.8	126.9	133.8	138.3	140.1	141.9	143.7	145.5
95°	112.5	119.2	126.0	130.4	132.5	134.7	136.8	138.9
97.5°	107.0	112.9	118.9	122.8	124.9	126.9	128.9	130.9
100°	107.8	111.8	115.7	118.7	120.3	122.0	123.7	125.4
102.5°	154.0	137.9	121.9	114.7	116.5	118.2	120.0	121.8
105°	247.2	253.8	260.5	262.6	260.0	257.5	255.0	252.5
107.5°	281.5	287.5	293.5	297.6	299.6	301.7	303.7	305.8
110°	305.0	310.4	315.7	319.4	321.6	323.8	325.8	328.0





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CATALOG NUMBER: S124DIP-S795D590U830-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	327.2	332.1	337.0	340.5	342.7	345.0	347.2	349.4
115°	360.6	365.8	370.9	374.3	375.8	377.4	378.9	380.5
117.5°	394.0	398.5	403.1	406.2	408.0	409.7	411.5	413.2
120°	414.2	419.0	423.7	426.8	428.3	429.8	431.4	432.9
122.5°	434.5	439.1	443.7	446.8	448.1	449.5	450.8	452.2
125°	463.1	467.7	472.2	475.3	476.7	478.2	479.7	481.1
127.5°	490.4	494.3	498.2	501.0	502.4	503.8	505.2	506.6
130°	507.0	511.1	515.2	517.9	519.3	520.7	522.0	523.3
132.5°	523.6	527.5	531.5	534.1	535.4	536.6	537.8	539.0
135°	545.2	548.9	552.7	555.4	557.0	558.6	560.2	561.8
137.5°	566.7	570.1	573.6	575.9	576.9	578.1	579.1	580.1
140°	580.0	583.2	586.5	588.8	590.0	591.3	592.5	593.7
142.5°	593.0	595.8	598.6	600.5	601.4	602.4	603.4	604.4
145°	612.1	613.5	615.0	616.2	617.4	618.5	619.6	620.8
147.5°	629.0	629.2	629.5	630.1	630.8	631.7	632.5	633.4
150°	640.8	640.8	640.8	640.9	641.0	641.2	641.3	641.4
152.5°	651.6	651.8	652.0	652.1	652.0	651.9	651.8	651.8
155°	666.0	666.5	666.9	667.0	666.7	666.3	666.0	665.6
157.5°	678.4	679.1	679.7	679.7	679.1	678.4	677.9	677.2
160°	686.4	687.1	687.9	687.9	687.1	686.4	685.7	684.9
162.5°	692.9	693.5	694.3	694.3	693.4	692.6	691.8	691.0
165°	701.9	702.9	703.9	703.8	702.7	701.6	700.6	699.5
167.5°	708.6	709.6	710.7	710.6	709.5	708.2	707.0	705.9
170°	712.7	713.6	714.6	714.4	713.3	712.1	710.9	709.7
172.5°	715.3	716.2	717.2	717.0	715.8	714.4	713.1	711.8
175°	718.3	719.3	720.5	720.3	718.9	717.4	716.0	714.5
177.5°	719.5	720.3	721.0	720.9	719.7	718.6	717.4	716.2
180°	718.9	718.9	718.9	718.9	718.9	718.9	718.9	718.9

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