

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: P332777-930

Luminaire Tested: **S124DIW-S795D470U930-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332777-930
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-S795D470U930-4F0-1E-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: 4169.5 lumens
Efficiency: N/A
Efficacy: 110.6 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

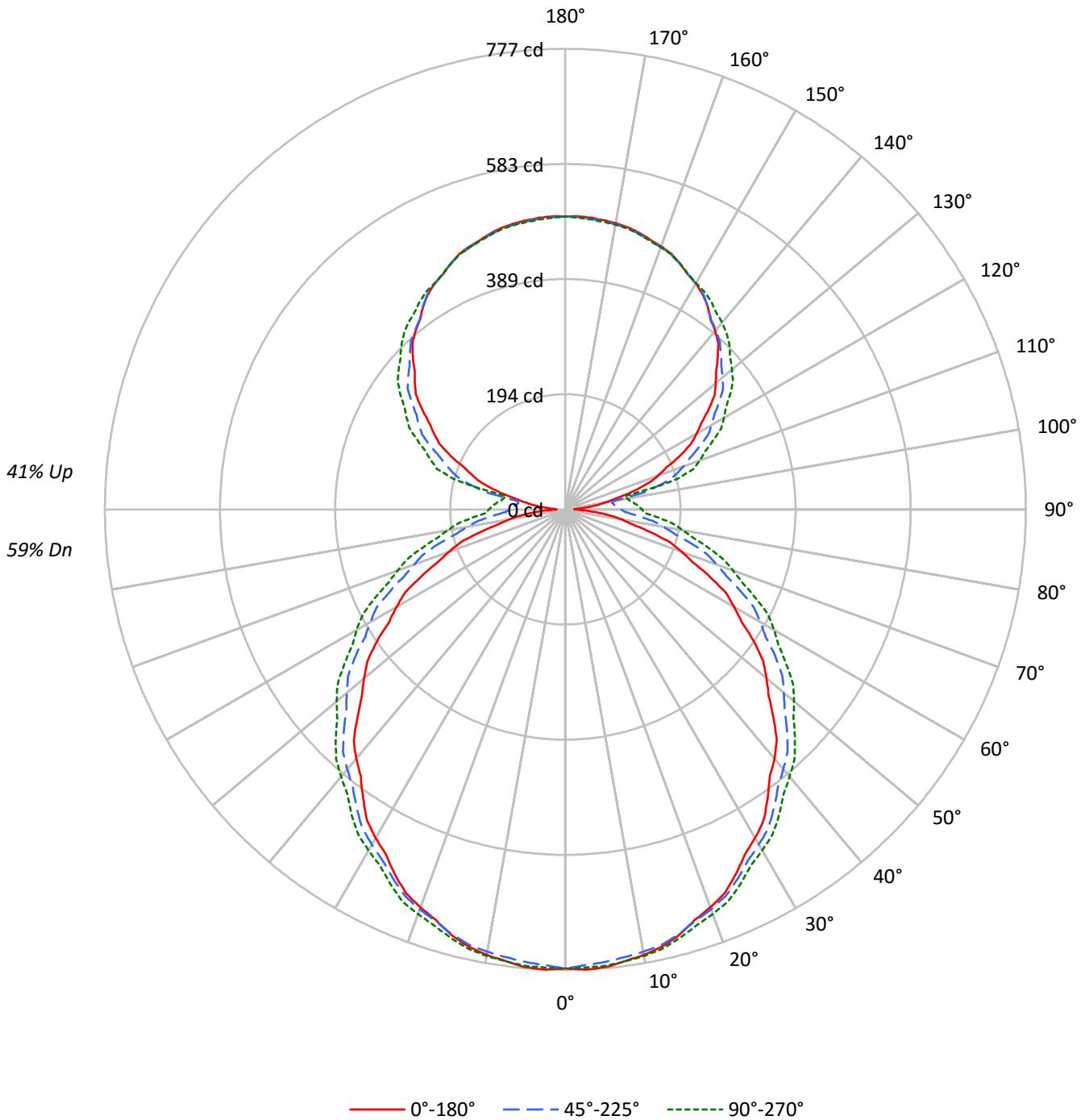
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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	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°	6252	6252	6252
5°	6271	6110	6128
10°	6233	6010	6006
15°	6177	5894	5862
20°	6093	5766	5723
25°	5998	5624	5569
30°	5895	5481	5411
35°	5779	5336	5274
40°	5685	5196	5129
45°	5547	5069	5005
50°	5430	4922	4876
55°	5310	4783	4722
60°	5121	4605	4583
65°	4915	4414	4411
70°	4666	4197	4210
75°	4318	3960	4029
80°	3929	3731	3851
85°	3441	3526	3748



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.3	1.8
10°-20°	210.1	5.0
20°-30°	317.7	7.6
30°-40°	384.4	9.2
40°-50°	406.4	9.7
50°-60°	382.5	9.2
60°-70°	317.3	7.6
70°-80°	222.9	5.3
80°-90°	127.4	3.1
90°-100°	91.7	2.2
100°-110°	163.1	3.9
110°-120°	243.3	5.8
120°-130°	282.6	6.8
130°-140°	289.0	6.9
140°-150°	263.6	6.3
150°-160°	211.1	5.1
160°-170°	136.1	3.3
170°-180°	46.9	1.1
0°-30°	601.2	14.4
0°-40°	985.6	23.6
0°-60°	1774.4	42.6
0°-90°	2442.1	58.6
90°-120°	498.1	11.9
90°-150°	1333.2	32.0
90°-180°	1727.0	41.4
0°-180°	4169.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	774	774	774	774	774	
5°	775	772	767	773	773	74
15°	743	744	741	749	748	209
25°	680	685	688	697	698	313
35°	595	605	614	626	629	372
45°	496	513	529	543	548	383
55°	388	407	433	449	455	346
65°	269	297	326	347	355	266
75°	149	182	218	241	250	159
85°	46	83	121	146	156	49
90°	15	54	94	120	129	10
95°	32	49	84	108	117	35
105°	119	139	172	196	191	125
115°	213	223	249	268	275	210
125°	295	297	317	334	340	264
135°	364	364	371	385	392	281
145°	418	419	419	424	428	261
155°	458	458	457	458	458	211
165°	483	481	481	484	481	136
175°	494	492	492	495	491	47
180°	494	494	494	494	494	



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CATALOG NUMBER: S124DIW-S795D470U930-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	774.5	774.5	774.5	774.5	774.5	774.5	774.5	774.5	774.5	774.5	774.5
2.5°	777.2	776.7	776.2	775.8	775.3	774.5	773.2	772.0	770.8	769.6	770.6
5°	775.3	774.7	774.1	773.6	773.0	772.0	770.6	769.3	767.9	766.6	768.2
7.5°	768.7	768.3	768.0	767.7	767.3	766.5	765.5	764.3	763.2	762.1	763.9
10°	763.1	763.0	762.8	762.5	762.4	761.8	760.8	759.9	758.9	757.9	759.7
12.5°	755.5	755.5	755.5	755.4	755.4	755.0	754.4	753.7	753.0	752.4	754.0
15°	743.2	743.4	743.6	743.8	744.0	743.8	743.2	742.7	742.0	741.4	743.2
17.5°	726.4	726.9	727.5	728.1	728.7	728.9	728.8	728.7	728.6	728.5	730.3
20°	714.6	715.2	715.8	716.3	716.9	717.3	717.5	717.6	717.9	718.0	720.0
22.5°	701.4	702.1	702.9	703.6	704.3	704.9	705.2	705.6	705.9	706.3	708.2
25°	679.9	681.0	682.2	683.4	684.5	685.4	686.0	686.6	687.1	687.7	689.8
27.5°	656.0	657.6	659.3	661.0	662.8	664.1	665.0	665.8	666.7	667.6	669.5
30°	640.0	641.6	643.1	644.7	646.2	647.6	649.0	650.3	651.7	653.0	655.1
32.5°	622.6	624.5	626.4	628.2	630.1	631.7	633.2	634.7	636.3	637.7	640.2
35°	594.9	597.2	599.6	601.9	604.1	606.3	608.2	610.2	612.0	614.0	616.7
37.5°	567.0	569.6	572.3	574.9	577.6	580.2	582.5	584.9	587.3	589.7	592.5
40°	548.9	551.5	553.9	556.4	559.0	561.6	564.3	567.0	569.6	572.3	575.3
42.5°	528.2	530.9	533.8	536.5	539.4	542.3	545.5	548.7	551.9	555.0	558.2
45°	496.0	499.7	503.4	507.0	510.7	514.4	518.0	521.7	525.3	529.0	532.3
47.5°	465.4	469.1	472.9	476.7	480.5	484.5	488.7	492.9	497.2	501.4	504.8
50°	443.1	447.4	451.6	455.8	460.1	464.3	468.6	472.8	477.0	481.3	485.2
52.5°	420.9	425.2	429.4	433.7	437.9	442.5	447.3	452.2	457.1	461.9	465.7
55°	388.5	392.6	396.6	400.6	404.7	409.6	415.4	421.2	427.0	432.8	436.6
57.5°	352.3	357.3	362.3	367.3	372.3	377.6	383.4	389.1	394.9	400.6	405.2
60°	328.6	333.7	338.7	343.7	348.7	354.4	360.8	367.1	373.5	379.8	384.3
62.5°	305.7	311.3	316.7	322.2	327.7	333.6	340.0	346.3	352.7	359.1	363.5
65°	268.8	275.0	281.2	287.3	293.5	299.9	306.4	313.0	319.5	326.0	330.8
67.5°	233.3	239.9	246.4	252.9	259.5	266.3	273.3	280.3	287.3	294.3	299.2
70°	209.0	215.6	222.1	228.7	235.2	242.1	249.5	256.8	264.1	271.4	276.6
72.5°	185.4	192.1	198.9	205.5	212.2	219.5	227.3	235.1	242.9	250.6	255.7
75°	149.2	156.3	163.4	170.6	177.7	185.3	193.4	201.5	209.6	217.7	223.1
77.5°	115.4	122.9	130.4	138.0	145.5	153.6	162.1	170.6	179.0	187.5	193.0
80°	94.5	102.2	109.9	117.6	125.4	133.5	141.9	150.4	158.9	167.4	173.2
82.5°	73.7	81.7	89.8	97.8	105.7	114.1	122.5	131.0	139.5	148.0	153.8
85°	46.0	54.1	62.1	70.3	78.4	86.7	95.4	104.0	112.8	121.4	127.2
87.5°	25.9	33.9	42.0	50.1	58.0	66.4	74.9	83.5	92.1	100.7	106.3
90°	15.0	23.6	32.2	40.8	49.4	58.2	67.2	76.1	85.0	94.0	100.0
92.5°	17.9	24.8	31.8	38.8	45.8	53.7	62.7	71.7	80.6	89.5	95.5
95°	31.6	35.1	38.7	42.3	45.9	51.6	59.6	67.6	75.6	83.6	89.3
97.5°	53.4	60.6	67.8	75.0	82.3	85.2	83.8	82.5	81.2	79.8	85.0
100°	70.1	76.6	83.1	89.6	96.1	97.4	93.6	89.8	86.0	82.2	85.9
102.5°	89.7	95.1	100.6	106.1	111.5	117.2	123.1	129.0	134.9	140.8	130.8
105°	119.0	123.4	127.8	132.1	136.4	142.4	149.9	157.4	165.0	172.5	178.1
107.5°	147.7	151.2	154.6	158.0	161.3	166.7	174.1	181.3	188.7	195.9	201.1
110°	166.6	169.5	172.4	175.4	178.3	183.4	190.7	197.9	205.1	212.4	217.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	184.7	187.6	190.5	193.3	196.1	200.9	207.5	214.2	220.9	227.6	231.8
115°	212.9	214.8	216.8	218.8	220.8	224.8	230.9	237.0	243.0	249.2	253.6
117.5°	238.9	240.3	241.7	243.0	244.4	248.0	254.0	259.9	265.8	271.7	275.7
120°	255.9	256.9	257.8	258.7	259.6	262.8	268.3	273.8	279.3	284.8	288.9
122.5°	272.6	272.8	273.1	273.5	273.8	276.6	282.0	287.4	292.8	298.2	302.1
125°	295.4	295.5	295.6	295.8	295.9	298.3	303.0	307.6	312.3	316.9	320.8
127.5°	317.6	317.6	317.5	317.3	317.2	319.2	323.3	327.3	331.4	335.5	338.9
130°	331.4	331.3	331.3	331.1	331.0	332.6	336.0	339.2	342.6	345.9	349.5
132.5°	344.8	344.7	344.6	344.6	344.5	345.9	348.7	351.5	354.2	357.0	360.4
135°	363.9	363.8	363.7	363.6	363.5	364.3	366.0	367.7	369.3	371.0	374.3
137.5°	381.5	381.3	381.2	381.0	380.8	381.3	382.3	383.4	384.3	385.4	388.3
140°	393.1	393.0	393.0	393.0	392.9	393.1	393.5	393.8	394.1	394.5	397.3
142.5°	402.7	402.9	403.2	403.5	403.7	403.8	403.8	403.8	403.8	403.7	406.1
145°	418.4	418.4	418.5	418.6	418.6	418.7	418.7	418.7	418.7	418.7	419.9
147.5°	431.0	431.3	431.5	431.9	432.1	432.2	432.1	432.0	431.9	431.9	432.1
150°	440.2	440.3	440.5	440.6	440.8	440.8	440.7	440.6	440.5	440.4	440.4
152.5°	447.2	447.4	447.6	447.8	448.1	448.1	448.0	447.8	447.7	447.5	447.7
155°	457.8	457.9	458.0	458.0	458.1	458.0	457.8	457.5	457.3	457.1	457.4
157.5°	466.9	466.8	466.8	466.8	466.7	466.5	466.3	465.9	465.7	465.5	465.9
160°	472.2	472.0	471.7	471.5	471.2	471.1	471.0	470.9	470.8	470.8	471.2
162.5°	477.0	476.6	476.3	476.0	475.7	475.5	475.4	475.3	475.2	475.2	475.6
165°	482.9	482.5	482.1	481.7	481.3	481.1	481.1	481.1	481.1	481.1	481.8
167.5°	487.6	487.2	486.8	486.4	485.9	485.7	485.7	485.6	485.6	485.5	486.2
170°	490.3	489.8	489.3	488.9	488.4	488.1	488.2	488.3	488.4	488.4	489.1
172.5°	492.1	491.6	491.1	490.6	490.2	489.9	490.0	490.1	490.2	490.2	490.9
175°	494.0	493.5	493.0	492.5	492.0	491.9	492.0	492.0	492.1	492.2	492.9
177.5°	494.9	494.5	494.0	493.5	493.1	492.9	493.0	493.2	493.3	493.4	493.9
180°	494.0	494.0	494.0	494.0	494.0	494.0	494.0	494.0	494.0	494.0	494.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	774.5	774.5	774.5	774.5	774.5	774.5	774.5	774.5
2.5°	771.7	772.8	773.9	774.4	774.2	774.0	773.9	773.7
5°	769.7	771.3	772.7	773.5	773.2	773.1	772.9	772.7
7.5°	765.6	767.3	769.1	769.8	769.6	769.4	769.2	769.1
10°	761.4	763.1	764.9	765.6	765.5	765.2	765.1	764.9
12.5°	755.5	757.2	758.7	759.5	759.5	759.4	759.4	759.3
15°	744.9	746.7	748.4	749.2	749.0	748.8	748.6	748.4
17.5°	732.0	733.8	735.6	736.4	736.2	736.1	735.9	735.7
20°	721.9	723.8	725.8	726.8	726.8	726.8	726.8	726.8
22.5°	710.1	712.0	714.0	715.1	715.4	715.7	716.0	716.3
25°	691.9	694.1	696.2	697.3	697.5	697.7	697.9	698.1
27.5°	671.5	673.4	675.5	676.5	676.8	677.0	677.3	677.4
30°	657.2	659.3	661.5	662.8	663.2	663.5	663.9	664.3
32.5°	642.6	645.1	647.4	648.9	649.2	649.6	650.0	650.4
35°	619.4	622.1	624.8	626.4	627.0	627.5	628.2	628.8
37.5°	595.2	597.9	600.6	602.3	602.9	603.6	604.1	604.8
40°	578.1	581.1	583.9	585.7	586.5	587.3	588.1	588.8
42.5°	561.4	564.6	567.8	569.7	570.3	571.0	571.6	572.2
45°	535.6	538.8	542.1	544.2	545.2	546.2	547.1	548.0
47.5°	508.2	511.6	515.0	517.2	518.4	519.6	520.7	521.9
50°	489.0	492.8	496.7	499.2	500.3	501.6	502.7	503.9
52.5°	469.6	473.4	477.3	479.8	480.9	482.1	483.2	484.5
55°	440.4	444.3	448.2	450.7	451.8	453.0	454.1	455.3
57.5°	409.9	414.4	419.0	421.8	422.9	424.0	425.1	426.2
60°	388.7	393.1	397.5	400.6	402.1	403.7	405.2	406.8
62.5°	367.9	372.3	376.7	379.8	381.3	382.9	384.3	385.9
65°	335.7	340.6	345.4	348.5	350.1	351.6	353.1	354.7
67.5°	304.1	309.0	313.9	317.1	318.6	320.1	321.6	323.1
70°	281.8	287.1	292.3	295.5	296.9	298.2	299.5	300.9
72.5°	260.7	265.8	270.8	274.1	275.6	277.1	278.6	280.1
75°	228.4	233.8	239.3	242.8	244.6	246.3	248.0	249.7
77.5°	198.4	203.9	209.4	213.0	214.9	216.7	218.6	220.5
80°	179.0	184.7	190.5	194.1	195.7	197.2	198.8	200.3
82.5°	159.8	165.8	171.7	175.5	177.2	178.9	180.6	182.3
85°	133.0	138.8	144.6	148.4	150.3	152.2	154.2	156.1
87.5°	112.0	117.7	123.4	127.1	128.8	130.6	132.3	134.0
90°	106.2	112.3	118.3	122.2	123.9	125.6	127.3	129.1
92.5°	101.3	107.3	113.2	117.0	118.5	120.1	121.7	123.3
95°	95.0	100.7	106.4	110.1	111.9	113.7	115.5	117.4
97.5°	90.0	95.1	100.2	103.6	105.3	107.1	108.8	110.6
100°	89.8	93.6	97.4	100.0	101.4	102.9	104.3	105.7
102.5°	120.7	110.7	100.8	96.4	98.0	99.5	101.0	102.6
105°	183.6	189.1	194.8	196.8	195.4	194.0	192.6	191.2
107.5°	206.1	211.2	216.4	219.7	221.4	223.1	224.9	226.6
110°	221.6	226.2	230.7	234.0	235.8	237.5	239.3	241.1



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CATALOG NUMBER: S124DIW-S795D470U930-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	236.0	240.3	244.5	247.5	249.4	251.3	253.2	254.9
115°	258.0	262.4	266.8	269.6	271.0	272.3	273.7	275.1
117.5°	279.6	283.6	287.6	290.4	291.9	293.4	294.9	296.4
120°	292.9	296.9	300.9	303.6	305.0	306.3	307.7	309.1
122.5°	306.1	310.1	314.0	316.6	317.8	319.0	320.2	321.5
125°	324.7	328.6	332.6	335.1	336.4	337.6	338.8	340.1
127.5°	342.3	345.8	349.2	351.6	352.8	354.0	355.2	356.5
130°	353.0	356.6	360.1	362.5	363.6	364.8	366.0	367.1
132.5°	363.9	367.2	370.6	372.9	374.0	375.0	376.2	377.2
135°	377.5	380.7	384.0	386.3	387.6	388.9	390.3	391.6
137.5°	391.3	394.4	397.3	399.3	400.2	401.1	402.0	402.9
140°	400.0	402.8	405.5	407.4	408.5	409.5	410.6	411.6
142.5°	408.5	410.9	413.3	414.9	415.7	416.5	417.4	418.2
145°	421.1	422.3	423.6	424.7	425.6	426.6	427.5	428.4
147.5°	432.3	432.5	432.8	433.2	433.9	434.6	435.3	436.0
150°	440.4	440.4	440.4	440.5	440.6	440.7	440.8	440.8
152.5°	447.8	447.9	448.1	448.1	448.1	448.0	447.9	447.9
155°	457.7	458.0	458.4	458.4	458.2	458.0	457.7	457.5
157.5°	466.3	466.7	467.1	467.1	466.7	466.3	465.9	465.5
160°	471.7	472.2	472.7	472.7	472.2	471.7	471.2	470.8
162.5°	476.1	476.6	477.1	477.1	476.5	476.0	475.4	474.9
165°	482.4	483.1	483.7	483.6	482.9	482.2	481.4	480.7
167.5°	487.0	487.7	488.4	488.4	487.5	486.7	485.9	485.1
170°	489.8	490.4	491.1	491.1	490.2	489.3	488.5	487.7
172.5°	491.5	492.2	492.8	492.8	491.9	491.0	490.1	489.2
175°	493.7	494.4	495.1	495.0	494.0	493.0	492.0	491.1
177.5°	494.5	495.0	495.5	495.4	494.6	493.8	493.0	492.3
180°	494.0	494.0	494.0	494.0	494.0	494.0	494.0	494.0

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