

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: P332747-927

Luminaire Tested: **S124DIW-S575D470U927-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332747-927
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-S575D470U927-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 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: 3362.7 lumens
Efficiency: N/A
Efficacy: 111.3 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

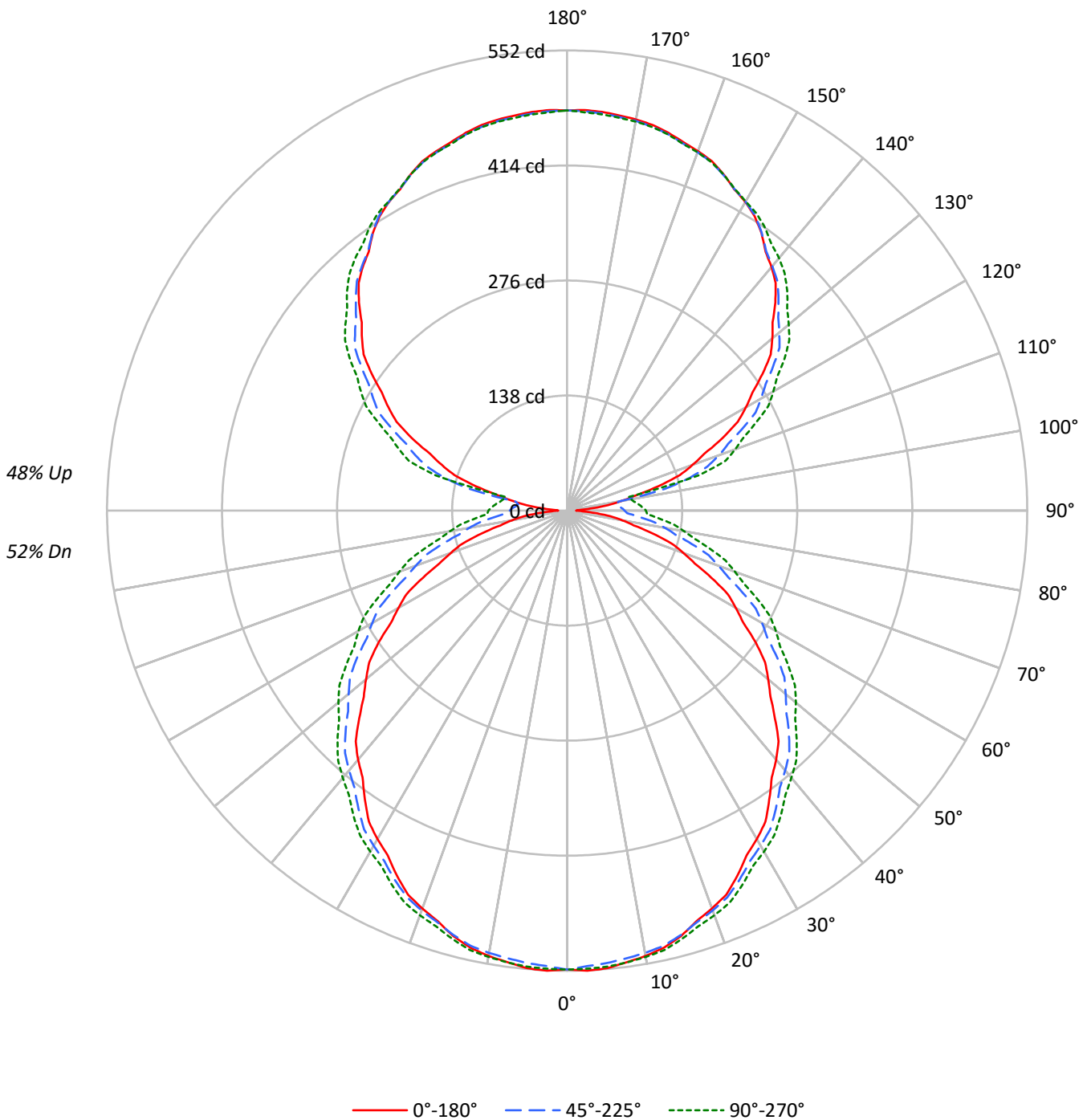
Input Watts (W): 30.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332747-927

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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	99	99	99	99	84	84	84		70	70	70		58	58	58	52
1	97	92	88	84	89	85	82	78	72	70	67		60	58	56		49	48	47	41
2	88	80	73	68	81	74	68	63	63	58	55		52	49	46		43	40	38	34
3	80	70	62	56	73	65	58	52	55	50	45		46	42	39		37	35	32	28
4	73	62	53	47	67	57	50	44	49	43	38		41	36	33		33	30	27	24
5	67	55	46	40	61	51	43	38	43	37	33		36	32	28		30	26	24	20
6	62	49	41	35	57	46	38	33	39	33	29		33	28	25		27	23	21	18
7	57	44	36	30	52	41	34	28	35	29	25		30	25	22		25	21	18	16
8	53	40	32	27	49	37	30	25	32	26	22		27	23	19		23	19	16	14
9	49	36	29	24	45	34	27	22	29	24	20		25	20	17		21	17	15	12
10	46	33	26	21	42	31	25	20	27	22	18		23	19	15		19	16	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4444	4444	4444
5°	4458	4343	4355
10°	4431	4273	4269
15°	4391	4190	4167
20°	4331	4099	4068
25°	4264	3998	3958
30°	4191	3896	3847
35°	4108	3792	3748
40°	4041	3694	3646
45°	3943	3603	3558
50°	3860	3498	3465
55°	3775	3400	3356
60°	3640	3274	3257
65°	3494	3139	3136
70°	3315	2985	2993
75°	3068	2814	2864
80°	2794	2652	2738
85°	2439	2507	2665



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.1	1.6
10°-20°	149.4	4.4
20°-30°	225.8	6.7
30°-40°	273.2	8.1
40°-50°	288.9	8.6
50°-60°	271.9	8.1
60°-70°	225.6	6.7
70°-80°	158.4	4.7
80°-90°	91.0	2.7
90°-100°	69.6	2.1
100°-110°	144.0	4.3
110°-120°	226.7	6.7
120°-130°	269.1	8.0
130°-140°	278.4	8.3
140°-150°	255.6	7.6
150°-160°	205.1	6.1
160°-170°	132.3	3.9
170°-180°	45.6	1.4
0°-30°	427.3	12.7
0°-40°	700.6	20.8
0°-60°	1261.3	37.5
0°-90°	1736.2	51.6
90°-120°	440.3	13.1
90°-150°	1243.5	37.0
90°-180°	1626.0	48.4
0°-180°	3362.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	550	550	550	550	550	
5°	551	549	545	550	549	52
15°	528	529	527	532	532	149
25°	483	487	489	495	496	223
35°	423	430	436	445	447	265
45°	353	364	376	386	390	272
55°	276	289	308	319	324	246
65°	191	211	232	247	252	189
75°	106	129	155	171	178	113
85°	33	59	86	104	111	35
90°	11	40	69	88	95	7
95°	28	37	62	80	86	32
105°	114	129	153	170	163	119
115°	206	213	232	245	250	202
125°	286	288	302	314	318	255
135°	353	353	358	369	373	272
145°	406	407	407	411	414	254
155°	445	445	444	445	444	205
165°	469	468	468	470	467	133
175°	480	478	478	481	477	46
180°	480	480	480	480	480	



TEST NUMBER: P332747-927

CATALOG NUMBER: S124DIW-S575D470U927-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5
2.5°	552.5	552.2	551.8	551.4	551.1	550.6	549.7	548.8	547.9	547.0	547.8
5°	551.1	550.7	550.2	549.9	549.5	548.7	547.8	546.8	545.9	544.9	546.1
7.5°	546.4	546.1	545.9	545.7	545.4	544.9	544.2	543.4	542.5	541.7	543.0
10°	542.5	542.3	542.2	542.1	541.9	541.5	540.8	540.1	539.5	538.8	540.0
12.5°	537.0	537.0	537.0	536.9	536.9	536.7	536.2	535.8	535.3	534.8	535.9
15°	528.3	528.5	528.5	528.7	528.9	528.7	528.3	527.9	527.4	527.0	528.3
17.5°	516.3	516.7	517.1	517.5	518.0	518.2	518.1	518.0	517.9	517.8	519.0
20°	507.9	508.3	508.7	509.2	509.6	509.8	510.0	510.2	510.2	510.4	511.7
22.5°	498.6	499.1	499.6	500.1	500.7	501.1	501.3	501.5	501.8	502.0	503.4
25°	483.3	484.1	485.0	485.8	486.6	487.2	487.6	488.0	488.5	488.9	490.4
27.5°	466.3	467.5	468.7	469.9	471.1	472.0	472.6	473.2	473.9	474.5	475.9
30°	455.0	456.1	457.1	458.2	459.3	460.3	461.3	462.2	463.2	464.2	465.7
32.5°	442.6	443.9	445.2	446.6	447.9	449.1	450.1	451.2	452.3	453.4	455.0
35°	422.9	424.5	426.2	427.8	429.4	430.9	432.3	433.7	435.1	436.4	438.4
37.5°	403.1	404.9	406.8	408.7	410.6	412.4	414.1	415.8	417.5	419.1	421.1
40°	390.2	392.0	393.8	395.5	397.4	399.2	401.1	403.0	405.0	406.9	408.9
42.5°	375.4	377.4	379.4	381.4	383.4	385.6	387.8	390.0	392.3	394.5	396.8
45°	352.6	355.2	357.8	360.4	363.0	365.6	368.2	370.8	373.4	376.0	378.3
47.5°	330.8	333.4	336.1	338.8	341.5	344.4	347.4	350.4	353.4	356.4	358.9
50°	315.0	318.0	321.0	324.1	327.1	330.1	333.1	336.1	339.1	342.1	344.8
52.5°	299.2	302.2	305.2	308.2	311.2	314.5	318.0	321.4	324.9	328.3	331.1
55°	276.2	279.0	281.9	284.8	287.6	291.1	295.2	299.4	303.5	307.6	310.4
57.5°	250.4	254.0	257.5	261.1	264.7	268.5	272.5	276.6	280.7	284.8	288.0
60°	233.6	237.2	240.7	244.3	247.9	251.9	256.4	260.9	265.5	270.0	273.1
62.5°	217.4	221.3	225.1	229.0	232.9	237.1	241.6	246.1	250.7	255.2	258.3
65°	191.1	195.5	199.9	204.2	208.7	213.2	217.8	222.4	227.1	231.8	235.2
67.5°	165.8	170.5	175.2	179.8	184.4	189.3	194.2	199.2	204.2	209.2	212.7
70°	148.5	153.2	157.9	162.6	167.2	172.1	177.3	182.5	187.7	193.0	196.6
72.5°	131.8	136.6	141.3	146.1	150.8	156.0	161.5	167.1	172.6	178.2	181.7
75°	106.0	111.1	116.1	121.2	126.3	131.7	137.4	143.2	149.0	154.7	158.6
77.5°	82.0	87.4	92.8	98.1	103.5	109.2	115.2	121.2	127.2	133.2	137.1
80°	67.2	72.6	78.2	83.7	89.1	94.8	100.9	106.9	113.0	119.0	123.1
82.5°	52.4	58.1	63.8	69.5	75.2	81.0	87.1	93.1	99.1	105.2	109.4
85°	32.6	38.4	44.2	49.9	55.7	61.6	67.8	74.0	80.2	86.3	90.4
87.5°	18.5	24.2	30.0	35.7	41.5	47.5	53.6	59.7	65.8	72.0	76.0
90°	10.9	17.3	23.7	30.0	36.4	42.8	49.4	55.8	62.4	68.9	73.4
92.5°	13.9	18.9	23.8	28.8	33.8	39.5	46.1	52.6	59.2	65.7	70.0
95°	27.7	29.5	31.4	33.2	35.0	38.7	44.4	50.1	55.8	61.6	65.7
97.5°	49.2	54.8	60.4	66.0	71.5	72.6	69.3	66.0	62.7	59.3	62.9
100°	65.7	70.7	75.7	80.6	85.6	85.3	79.6	74.0	68.3	62.7	65.0
102.5°	84.6	88.8	93.0	97.1	101.3	105.3	109.1	112.9	116.7	120.5	109.5
105°	113.6	116.8	120.0	123.3	126.5	130.9	136.3	141.8	147.3	152.7	156.9
107.5°	141.6	144.0	146.6	149.0	151.5	155.4	160.7	166.1	171.4	176.7	180.5
110°	160.0	162.2	164.4	166.5	168.7	172.4	177.6	182.9	188.2	193.5	196.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	177.9	180.1	182.2	184.3	186.4	189.9	194.7	199.5	204.3	209.1	212.1
115°	205.5	206.9	208.4	209.8	211.4	214.2	218.6	222.8	227.1	231.5	234.6
117.5°	230.8	231.9	233.0	234.0	235.0	237.7	242.0	246.2	250.5	254.8	257.5
120°	247.6	248.3	249.1	249.8	250.5	252.8	256.7	260.6	264.5	268.4	271.2
122.5°	263.6	264.0	264.2	264.5	264.7	266.8	270.7	274.6	278.5	282.3	285.1
125°	286.1	286.3	286.5	286.6	286.8	288.5	291.8	295.1	298.3	301.6	304.4
127.5°	307.8	307.8	307.7	307.6	307.6	309.0	312.0	315.1	318.1	321.0	323.4
130°	321.4	321.3	321.2	321.2	321.2	322.3	324.8	327.2	329.6	332.1	334.6
132.5°	334.3	334.3	334.3	334.3	334.3	335.3	337.4	339.5	341.5	343.6	346.0
135°	353.1	353.0	352.9	352.8	352.8	353.3	354.7	355.9	357.2	358.5	360.8
137.5°	370.3	370.1	370.0	369.9	369.8	370.2	371.0	371.8	372.6	373.4	375.6
140°	381.4	381.4	381.5	381.5	381.5	381.7	382.0	382.3	382.5	382.9	384.9
142.5°	391.0	391.3	391.5	391.7	392.1	392.1	392.2	392.2	392.2	392.2	394.0
145°	406.3	406.4	406.5	406.6	406.7	406.8	406.8	406.8	406.8	406.8	407.7
147.5°	418.6	418.9	419.2	419.5	419.9	419.9	419.9	419.8	419.7	419.6	419.8
150°	427.5	427.7	427.9	428.0	428.3	428.3	428.2	428.1	428.0	427.9	427.9
152.5°	434.4	434.7	434.9	435.1	435.4	435.4	435.3	435.1	435.0	434.8	435.0
155°	444.8	444.9	445.0	445.0	445.1	445.0	444.8	444.6	444.3	444.1	444.4
157.5°	453.7	453.6	453.5	453.5	453.4	453.3	453.0	452.7	452.5	452.3	452.7
160°	458.8	458.6	458.4	458.1	457.9	457.7	457.6	457.6	457.5	457.4	457.9
162.5°	463.4	463.1	462.8	462.5	462.2	462.0	461.9	461.8	461.8	461.7	462.2
165°	469.2	468.8	468.4	468.0	467.6	467.5	467.5	467.5	467.5	467.5	468.1
167.5°	473.8	473.4	473.0	472.6	472.1	471.9	471.9	471.8	471.8	471.7	472.5
170°	476.4	475.9	475.5	475.0	474.5	474.3	474.4	474.4	474.5	474.6	475.2
172.5°	478.2	477.7	477.2	476.7	476.3	476.0	476.1	476.2	476.3	476.3	477.0
175°	480.0	479.5	479.0	478.6	478.1	477.9	478.0	478.1	478.2	478.2	479.0
177.5°	480.9	480.5	480.0	479.5	479.1	479.0	479.0	479.2	479.3	479.4	479.9
180°	480.0	480.0	480.0	480.0	480.0	480.0	480.0	480.0	480.0	480.0	480.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5
2.5°	548.6	549.3	550.1	550.4	550.3	550.2	550.1	550.0
5°	547.2	548.2	549.3	549.8	549.7	549.5	549.4	549.2
7.5°	544.2	545.4	546.7	547.2	547.1	546.9	546.8	546.7
10°	541.2	542.5	543.7	544.2	544.2	544.0	543.8	543.7
12.5°	537.1	538.2	539.3	539.9	539.9	539.8	539.8	539.8
15°	529.5	530.8	532.0	532.5	532.4	532.3	532.1	532.0
17.5°	520.3	521.6	522.8	523.4	523.3	523.2	523.1	523.0
20°	513.2	514.5	515.9	516.6	516.6	516.6	516.6	516.6
22.5°	504.8	506.1	507.5	508.3	508.5	508.7	509.0	509.2
25°	491.9	493.4	494.9	495.7	495.8	496.0	496.1	496.2
27.5°	477.4	478.7	480.1	480.9	481.1	481.3	481.4	481.6
30°	467.2	468.7	470.2	471.1	471.3	471.7	471.9	472.2
32.5°	456.8	458.5	460.3	461.2	461.5	461.8	462.1	462.3
35°	440.3	442.2	444.1	445.3	445.7	446.1	446.5	446.9
37.5°	423.1	425.0	427.0	428.2	428.6	429.0	429.4	429.9
40°	411.0	413.0	415.1	416.4	416.9	417.5	418.0	418.6
42.5°	399.1	401.3	403.6	405.0	405.4	405.8	406.3	406.7
45°	380.7	383.0	385.3	386.8	387.5	388.2	388.9	389.6
47.5°	361.2	363.7	366.1	367.7	368.5	369.3	370.2	371.0
50°	347.6	350.4	353.1	354.9	355.7	356.5	357.4	358.1
52.5°	333.8	336.5	339.3	341.0	341.9	342.7	343.5	344.4
55°	313.1	315.8	318.5	320.4	321.2	322.0	322.8	323.6
57.5°	291.3	294.6	297.9	299.8	300.6	301.3	302.1	302.9
60°	276.3	279.5	282.6	284.7	285.8	286.9	288.0	289.1
62.5°	261.5	264.7	267.8	269.9	271.0	272.1	273.2	274.3
65°	238.6	242.1	245.5	247.7	248.8	249.9	251.0	252.2
67.5°	216.2	219.7	223.2	225.4	226.5	227.5	228.6	229.7
70°	200.3	204.1	207.7	210.1	211.0	212.0	212.9	213.9
72.5°	185.3	188.9	192.5	194.8	195.9	196.9	198.0	199.1
75°	162.4	166.2	170.1	172.6	173.8	175.1	176.3	177.5
77.5°	141.1	145.0	148.9	151.5	152.7	154.1	155.3	156.7
80°	127.2	131.3	135.4	138.0	139.1	140.2	141.3	142.4
82.5°	113.6	117.8	122.1	124.8	126.0	127.1	128.3	129.6
85°	94.5	98.6	102.7	105.5	106.9	108.2	109.6	111.0
87.5°	80.1	84.2	88.2	90.9	92.1	93.4	94.6	95.9
90°	77.8	82.3	86.7	89.6	90.9	92.1	93.3	94.6
92.5°	74.4	78.7	83.0	85.8	86.9	88.0	89.2	90.3
95°	69.9	74.1	78.3	81.0	82.3	83.6	84.9	86.3
97.5°	66.5	70.2	73.8	76.3	77.6	78.8	80.1	81.3
100°	67.3	69.7	72.0	73.7	74.8	75.8	76.8	77.9
102.5°	98.4	87.4	76.3	71.4	72.4	73.5	74.6	75.7
105°	161.0	165.1	169.3	170.5	168.7	166.9	165.1	163.3
107.5°	184.2	187.9	191.6	194.2	195.4	196.7	198.0	199.3
110°	200.1	203.4	206.7	209.1	210.3	211.7	213.0	214.4



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CATALOG NUMBER: S124DIW-S575D470U927-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	215.1	218.1	221.1	223.3	224.7	226.2	227.5	228.9
115°	237.8	241.0	244.2	246.2	247.2	248.1	249.1	250.1
117.5°	260.4	263.2	266.0	268.0	269.0	270.1	271.2	272.2
120°	274.2	277.1	280.0	281.9	282.8	283.8	284.7	285.7
122.5°	288.0	290.8	293.7	295.5	296.3	297.1	297.9	298.7
125°	307.3	310.1	313.0	314.8	315.8	316.6	317.6	318.5
127.5°	325.8	328.3	330.7	332.3	333.2	334.1	334.9	335.8
130°	337.2	339.7	342.2	343.9	344.8	345.5	346.4	347.2
132.5°	348.5	350.9	353.3	354.9	355.7	356.4	357.2	358.0
135°	363.1	365.5	367.9	369.6	370.5	371.5	372.5	373.4
137.5°	377.8	379.9	382.1	383.6	384.2	384.8	385.5	386.1
140°	386.9	389.0	390.9	392.4	393.1	393.9	394.7	395.4
142.5°	395.7	397.4	399.2	400.4	400.9	401.6	402.1	402.7
145°	408.6	409.5	410.4	411.1	411.9	412.6	413.3	414.0
147.5°	419.9	420.2	420.3	420.6	421.2	421.7	422.2	422.7
150°	427.9	427.9	427.9	428.0	428.1	428.2	428.3	428.3
152.5°	435.1	435.2	435.4	435.4	435.4	435.3	435.2	435.2
155°	444.7	445.0	445.4	445.4	445.2	445.0	444.7	444.5
157.5°	453.0	453.4	453.8	453.8	453.4	453.0	452.7	452.3
160°	458.4	458.8	459.3	459.3	458.8	458.4	457.9	457.4
162.5°	462.6	463.1	463.6	463.6	463.0	462.5	461.9	461.4
165°	468.7	469.4	470.0	469.9	469.2	468.5	467.8	467.1
167.5°	473.2	473.9	474.6	474.5	473.7	472.9	472.1	471.3
170°	475.9	476.5	477.2	477.1	476.3	475.5	474.7	473.9
172.5°	477.6	478.2	478.9	478.8	477.9	477.1	476.2	475.3
175°	479.7	480.4	481.1	480.9	480.0	479.0	478.1	477.1
177.5°	480.5	480.9	481.5	481.3	480.6	479.8	479.0	478.3
180°	480.0	480.0	480.0	480.0	480.0	480.0	480.0	480.0

(END OF REPORT)