

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: P331557

Luminaire Tested: **S122DIW-S865D435U835-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331557
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S865D435U835-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 435 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

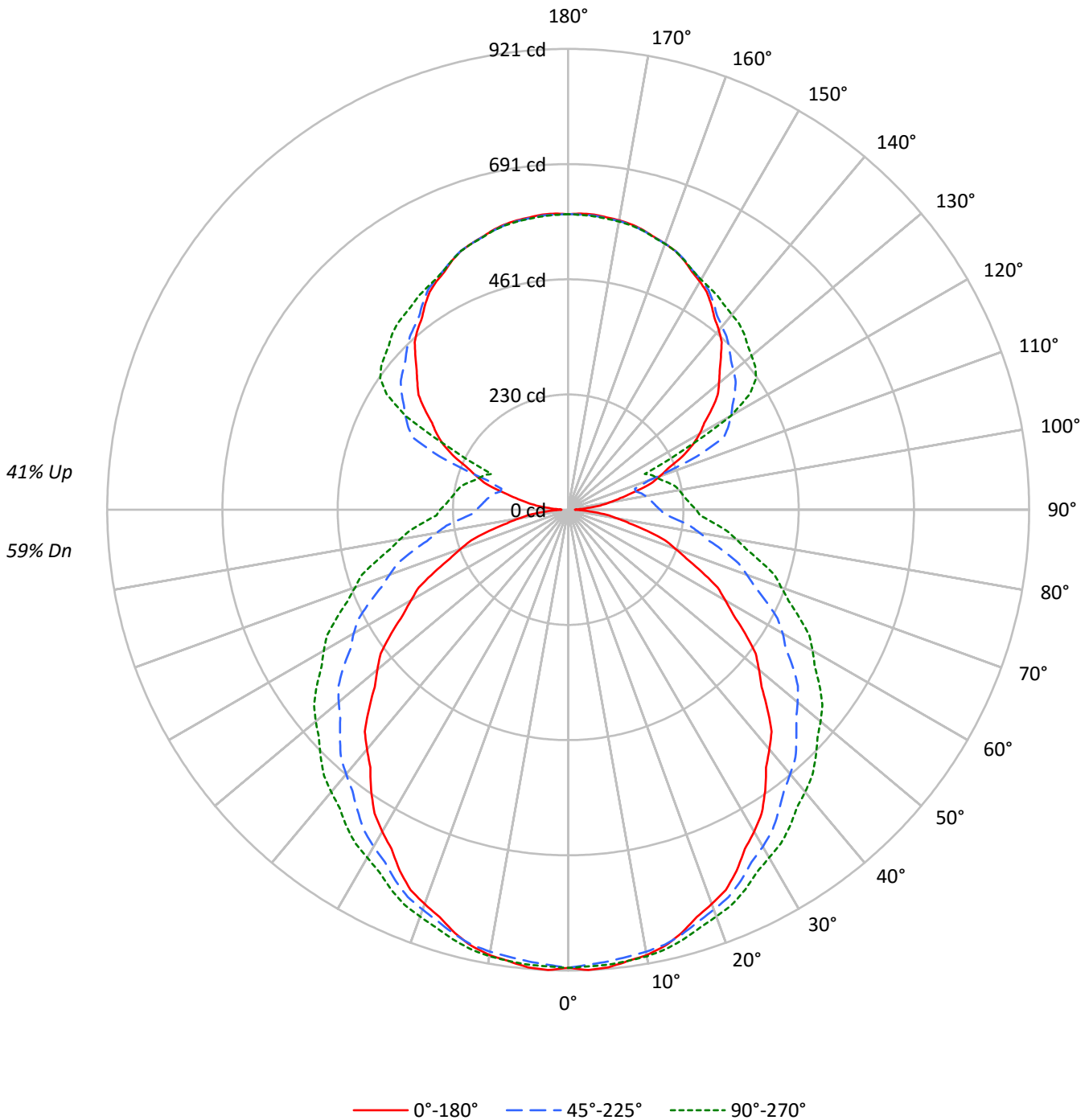
Lumens per Lamp: N/A
Luminaire Lumens: 5225.6 lumens
Efficiency: N/A
Efficacy: 113.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

Input Watts (W): 46.2
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





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				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	109	109	109	109	102	102	102	102	89	89	89	76	76	76	65	65	65	59
1	98	93	88	84	91	87	83	79	75	72	69	64	62	60	54	53	51	46
2	89	80	73	67	82	75	69	63	65	60	56	55	52	49	47	44	42	37
3	80	70	62	55	75	65	58	52	57	51	46	48	44	40	41	38	35	31
4	73	62	53	46	68	58	50	44	50	44	39	43	38	34	36	33	29	26
5	67	55	46	39	62	51	43	37	44	38	33	38	33	29	32	29	25	22
6	62	49	40	34	57	46	38	32	40	34	29	34	29	25	29	25	22	19
7	57	44	36	30	53	41	34	28	36	30	25	31	26	22	27	23	20	17
8	53	40	32	26	49	38	30	25	33	27	22	29	24	20	25	20	17	15
9	49	36	29	23	46	34	27	22	30	24	20	26	21	18	23	19	16	13
10	46	33	26	21	43	31	25	20	28	22	18	24	19	16	21	17	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14783	14783	14783
5°	14855	14230	14176
10°	14762	13809	13655
15°	14558	13364	13106
20°	14300	12888	12577
25°	14048	12428	12096
30°	13689	11955	11614
35°	13327	11498	11275
40°	12947	11110	10935
45°	12584	10762	10645
50°	12196	10448	10360
55°	11790	10109	10067
60°	11292	9759	9760
65°	10774	9347	9393
70°	10189	8905	8999
75°	9446	8470	8637
80°	8274	8029	8266
85°	7152	7646	7981



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.8	1.7
10°-20°	248.8	4.8
20°-30°	377.0	7.2
30°-40°	459.2	8.8
40°-50°	494.0	9.5
50°-60°	479.7	9.2
60°-70°	418.9	8.0
70°-80°	322.5	6.2
80°-90°	217.9	4.2
90°-100°	168.8	3.2
100°-110°	181.1	3.5
110°-120°	265.1	5.1
120°-130°	359.0	6.9
130°-140°	355.9	6.8
140°-150°	318.1	6.1
150°-160°	253.4	4.8
160°-170°	163.3	3.1
170°-180°	56.2	1.1
0°-30°	712.5	13.6
0°-40°	1171.7	22.4
0°-60°	2145.5	41.1
0°-90°	3104.7	59.4
90°-120°	615.0	11.8
90°-150°	1648.0	31.5
90°-180°	2121.0	40.6
0°-180°	5225.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	916	916	916	916	916	
5°	918	914	906	914	913	87
15°	876	878	878	890	889	247
25°	796	806	817	833	837	366
35°	686	709	734	762	772	429
45°	563	599	645	684	699	434
55°	431	480	548	594	613	385
65°	295	360	438	490	510	293
75°	163	238	322	377	397	173
85°	48	130	215	269	289	51
90°	14	96	184	237	256	10
95°	38	89	169	220	237	42
105°	137	182	140	189	208	146
115°	251	276	343	193	169	247
125°	350	358	406	444	458	313
135°	431	439	455	486	497	333
145°	499	499	506	516	521	312
155°	549	546	550	553	550	253
165°	579	576	577	580	577	163
175°	592	589	590	592	589	56
180°	591	591	591	591	591	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6
2.5°	920.9	920.2	919.5	918.8	918.1	916.9	915.2	913.6	911.9	910.3	911.5
5°	918.2	917.4	916.5	915.6	914.7	913.4	911.6	909.8	908.1	906.3	908.1
7.5°	910.0	909.4	908.8	908.3	907.7	906.7	905.3	904.0	902.6	901.3	903.4
10°	903.7	903.1	902.5	901.9	901.3	900.6	899.7	898.8	897.9	897.0	899.4
12.5°	893.0	893.2	893.3	893.4	893.5	893.2	892.6	891.9	891.3	890.6	893.0
15°	875.8	876.4	877.0	877.6	878.1	878.4	878.4	878.4	878.4	878.4	881.1
17.5°	853.5	854.7	856.0	857.2	858.4	859.5	860.5	861.4	862.4	863.3	866.1
20°	838.6	840.1	841.6	843.1	844.5	845.9	847.0	848.2	849.4	850.6	853.8
22.5°	822.7	824.4	826.1	827.8	829.5	831.2	832.9	834.5	836.2	837.8	841.1
25°	796.2	798.2	800.3	802.4	804.4	806.8	809.4	812.1	814.7	817.4	820.9
27.5°	764.3	767.7	771.0	774.4	777.8	781.0	784.1	787.3	790.4	793.5	798.0
30°	743.1	746.9	750.8	754.6	758.4	762.3	766.1	769.9	773.8	777.6	782.3
32.5°	719.7	724.0	728.3	732.7	737.0	741.4	745.9	750.5	755.0	759.5	765.0
35°	686.0	691.0	696.1	701.1	706.1	711.4	717.0	722.6	728.2	733.8	740.3
37.5°	649.4	655.2	661.0	666.7	672.5	679.0	686.3	693.6	700.8	708.1	715.3
40°	625.0	631.5	638.0	644.5	650.9	658.2	666.1	674.1	682.1	690.0	697.7
42.5°	601.6	608.1	614.6	621.1	627.6	635.4	644.5	653.7	662.8	672.0	680.3
45°	562.6	570.6	578.5	586.5	594.5	603.6	613.9	624.3	634.6	644.9	654.0
47.5°	524.1	532.8	541.5	550.2	558.8	569.2	581.3	593.4	605.5	617.6	627.1
50°	497.6	506.7	515.9	525.0	534.2	545.4	558.6	571.9	585.2	598.5	608.5
52.5°	472.1	481.7	491.4	501.0	510.6	522.4	536.4	550.3	564.3	578.3	588.5
55°	431.3	441.9	452.5	463.1	473.7	486.7	502.0	517.4	532.7	548.0	558.6
57.5°	390.9	402.9	414.9	426.8	438.8	452.6	468.2	483.9	499.5	515.1	526.6
60°	362.3	374.9	387.6	400.3	413.0	427.7	444.5	461.3	478.1	495.0	506.2
62.5°	336.8	349.9	363.1	376.2	389.4	404.4	421.2	438.0	454.8	471.6	483.5
65°	294.6	309.0	323.5	337.9	352.4	368.3	385.7	403.1	420.5	437.9	450.0
67.5°	255.8	270.9	286.0	301.1	316.2	332.7	350.5	368.3	386.1	403.9	416.1
70°	228.2	243.6	258.9	274.2	289.6	306.4	324.7	342.9	361.2	379.5	392.2
72.5°	202.8	218.6	234.4	250.2	266.0	283.1	301.7	320.2	338.7	357.2	369.7
75°	163.2	179.7	196.2	212.8	229.3	247.0	265.8	284.7	303.6	322.4	335.1
77.5°	125.0	142.3	159.6	176.8	194.1	212.3	231.5	250.7	269.8	289.0	301.6
80°	99.5	117.5	135.5	153.5	171.5	190.0	209.2	228.4	247.5	266.7	279.1
82.5°	78.3	96.0	113.8	131.5	149.3	167.9	187.3	206.7	226.1	245.5	257.9
85°	47.8	66.1	84.3	102.6	120.9	139.5	158.3	177.2	196.1	215.0	227.4
87.5°	26.1	43.9	61.7	79.4	97.2	115.6	134.7	153.7	172.7	191.7	203.9
90°	13.7	31.8	50.0	68.1	86.3	105.2	124.8	144.4	164.1	183.7	196.0
92.5°	20.8	36.7	52.5	68.3	84.2	101.3	119.9	138.4	157.0	175.5	187.3
95°	38.4	49.1	59.8	70.6	81.3	95.8	114.2	132.6	150.9	169.3	180.9
97.5°	64.4	67.9	71.4	74.9	78.4	89.4	107.9	126.5	145.0	163.5	174.8
100°	84.9	82.8	80.7	78.6	76.5	84.5	102.7	120.8	138.9	157.1	168.7
102.5°	106.4	113.7	120.9	128.1	135.3	140.2	142.7	145.2	147.8	150.3	162.0
105°	136.6	148.0	159.4	170.8	182.2	182.6	172.0	161.4	150.8	140.2	151.6
107.5°	172.5	181.6	190.7	199.9	209.0	205.4	189.0	172.6	156.1	139.7	148.6
110°	194.7	202.5	210.4	218.3	226.2	223.7	210.7	197.7	184.7	171.7	171.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	216.5	223.3	230.0	236.7	243.4	250.3	257.2	264.2	271.1	278.1	285.9
115°	251.1	255.9	260.8	265.6	270.5	280.8	296.4	312.0	327.7	343.3	358.9
117.5°	280.6	284.5	288.5	292.4	296.3	305.2	319.1	333.0	346.9	360.8	374.7
120°	303.2	305.8	308.4	311.0	313.6	321.6	335.1	348.7	362.2	375.7	389.2
122.5°	322.3	324.3	326.3	328.2	330.2	337.7	350.6	363.6	376.5	389.5	402.4
125°	350.1	351.4	352.6	353.8	355.1	361.3	372.6	383.8	395.0	406.3	417.5
127.5°	376.6	377.6	378.7	379.8	380.8	385.9	394.8	403.8	412.7	421.7	430.6
130°	393.3	394.5	395.8	397.0	398.2	402.4	409.7	416.9	424.2	431.4	438.7
132.5°	410.4	411.4	412.4	413.4	414.4	417.8	423.6	429.4	435.3	441.1	447.0
135°	431.3	432.8	434.3	435.9	437.4	440.0	443.9	447.7	451.5	455.3	459.2
137.5°	453.8	454.8	455.8	456.8	457.8	459.4	461.7	464.0	466.2	468.5	470.8
140°	468.5	469.0	469.4	469.9	470.4	471.4	473.0	474.7	476.3	477.9	479.5
142.5°	480.8	481.2	481.6	482.0	482.4	483.2	484.5	485.8	487.2	488.5	489.8
145°	498.8	498.7	498.6	498.5	498.4	499.2	500.8	502.4	504.0	505.6	507.2
147.5°	515.6	515.3	514.9	514.6	514.2	514.8	516.4	518.0	519.6	521.2	522.8
150°	526.6	525.9	525.2	524.6	523.9	524.3	525.9	527.4	528.9	530.4	531.9
152.5°	535.8	535.1	534.3	533.6	532.8	533.2	534.6	536.1	537.5	539.0	540.4
155°	549.2	548.4	547.5	546.7	545.8	546.0	547.1	548.2	549.4	550.5	551.6
157.5°	559.7	559.0	558.3	557.6	556.9	556.9	557.7	558.5	559.3	560.1	560.9
160°	565.9	565.3	564.8	564.2	563.6	563.6	564.2	564.8	565.3	565.9	566.5
162.5°	571.4	570.8	570.2	569.7	569.1	569.1	569.5	570.0	570.5	571.0	571.5
165°	578.7	578.2	577.6	577.0	576.4	576.3	576.6	576.9	577.2	577.4	577.7
167.5°	584.2	583.6	583.1	582.5	581.9	581.8	582.0	582.3	582.6	582.8	583.1
170°	587.3	586.7	586.1	585.6	585.0	584.8	585.0	585.2	585.4	585.6	585.8
172.5°	589.3	588.8	588.2	587.6	587.0	586.9	587.0	587.2	587.4	587.6	587.8
175°	592.0	591.3	590.6	590.0	589.3	589.1	589.3	589.5	589.6	589.8	590.0
177.5°	592.4	591.9	591.3	590.8	590.3	590.0	590.1	590.2	590.3	590.3	590.4
180°	590.7	590.7	590.7	590.7	590.7	590.7	590.7	590.7	590.7	590.7	590.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	915.6	915.6	915.6	915.6	915.6	915.6	915.6	915.6
2.5°	912.6	913.8	915.0	915.4	914.9	914.4	913.9	913.5
5°	909.8	911.6	913.4	914.1	913.8	913.5	913.2	912.9
7.5°	905.5	907.6	909.8	910.7	910.4	910.1	909.8	909.5
10°	901.7	904.1	906.5	907.5	907.2	906.9	906.6	906.3
12.5°	895.4	897.7	900.1	901.1	900.8	900.5	900.2	899.9
15°	883.7	886.4	889.1	890.2	889.9	889.6	889.3	889.1
17.5°	868.9	871.6	874.4	875.8	875.8	875.8	875.8	875.8
20°	857.1	860.3	863.5	865.2	865.2	865.2	865.2	865.2
22.5°	844.3	847.6	850.8	852.7	853.1	853.6	854.1	854.6
25°	824.5	828.0	831.6	833.8	834.6	835.5	836.4	837.3
27.5°	802.5	807.0	811.4	814.0	814.7	815.3	816.0	816.6
30°	787.0	791.7	796.5	799.3	800.1	801.0	801.9	802.8
32.5°	770.4	775.8	781.2	784.8	786.3	787.9	789.5	791.1
35°	746.8	753.3	759.8	764.0	766.1	768.2	770.2	772.3
37.5°	722.4	729.6	736.8	741.5	743.7	745.9	748.1	750.3
40°	705.3	713.0	720.7	725.8	728.5	731.1	733.8	736.5
42.5°	688.7	697.1	705.5	711.0	713.6	716.3	718.9	721.6
45°	663.2	672.3	681.5	687.5	690.5	693.4	696.4	699.3
47.5°	636.7	646.2	655.8	662.2	665.4	668.7	671.9	675.2
50°	618.5	628.5	638.6	645.2	648.4	651.7	654.9	658.2
52.5°	598.8	609.1	619.3	626.2	629.7	633.2	636.6	640.1
55°	569.3	579.9	590.5	597.7	601.5	605.4	609.2	613.0
57.5°	538.0	549.4	560.9	568.6	572.4	576.3	580.2	584.1
60°	517.4	528.6	539.8	547.4	551.6	555.7	559.8	564.0
62.5°	495.4	507.3	519.2	527.2	531.0	534.9	538.8	542.7
65°	462.1	474.2	486.3	494.2	498.0	501.9	505.7	509.5
67.5°	428.3	440.5	452.8	460.9	464.9	468.9	472.9	476.9
70°	404.9	417.5	430.2	438.3	441.9	445.4	449.0	452.5
72.5°	382.1	394.5	407.0	415.3	419.6	423.8	428.1	432.3
75°	347.8	360.5	373.2	381.4	385.3	389.1	392.9	396.8
77.5°	314.3	326.9	339.5	347.9	352.0	356.1	360.3	364.4
80°	291.5	303.9	316.3	324.5	328.6	332.8	336.9	341.0
82.5°	270.3	282.6	295.0	303.2	307.1	310.9	314.8	318.7
85°	239.7	252.1	264.5	272.8	276.9	281.0	285.1	289.3
87.5°	216.0	228.1	240.2	248.2	252.0	255.8	259.6	263.5
90°	208.2	220.5	232.8	240.8	244.5	248.2	252.0	255.7
92.5°	199.1	210.9	222.7	230.5	234.1	237.8	241.4	245.1
95°	192.6	204.3	216.0	223.6	227.0	230.4	233.9	237.3
97.5°	186.1	197.4	208.7	216.1	219.7	223.3	226.9	230.5
100°	180.4	192.1	203.7	211.3	214.7	218.2	221.6	225.0
102.5°	173.6	185.3	197.0	204.5	208.1	211.6	215.1	218.6
105°	162.9	174.3	185.7	193.1	196.8	200.4	204.0	207.6
107.5°	157.4	166.3	175.1	181.3	185.0	188.6	192.2	195.8
110°	171.5	171.5	171.4	173.2	176.8	180.4	184.1	187.7



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CATALOG NUMBER: S122DIW-S865D435U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	227.7	202.5	177.2	166.4	170.0	173.5	177.1	180.6
115°	273.1	237.9	202.8	183.4	179.9	176.3	172.7	169.1
117.5°	357.0	355.1	353.2	342.5	323.0	303.6	284.1	264.6
120°	394.5	403.9	413.2	413.2	403.6	394.0	384.4	374.8
122.5°	406.9	415.6	424.3	428.8	429.1	429.3	429.6	429.9
125°	423.5	432.2	440.8	446.6	449.5	452.4	455.4	458.3
127.5°	438.3	446.5	454.8	460.3	462.9	465.6	468.2	470.9
130°	447.6	455.8	463.9	469.1	471.3	473.6	475.9	478.1
132.5°	456.6	464.3	472.0	477.0	479.3	481.6	483.8	486.1
135°	469.5	476.7	483.8	488.5	490.7	492.8	495.0	497.2
137.5°	481.2	487.6	493.9	498.0	499.6	501.3	503.0	504.7
140°	489.1	494.7	500.2	503.7	505.0	506.3	507.5	508.8
142.5°	497.6	502.1	506.7	509.5	510.5	511.6	512.7	513.7
145°	510.5	512.9	515.4	517.1	518.1	519.1	520.1	521.1
147.5°	522.7	523.4	524.1	524.6	524.9	525.2	525.6	525.9
150°	531.6	532.1	532.7	532.8	532.3	531.8	531.3	530.9
152.5°	540.1	540.7	541.3	541.2	540.6	540.0	539.3	538.7
155°	551.7	552.2	552.8	552.7	551.9	551.2	550.4	549.7
157.5°	561.4	562.0	562.7	562.6	561.9	561.1	560.4	559.7
160°	567.0	567.6	568.2	568.1	567.5	566.8	566.1	565.5
162.5°	572.3	573.0	573.6	573.5	572.7	571.9	571.1	570.3
165°	578.8	579.4	580.1	580.1	579.4	578.8	578.1	577.4
167.5°	584.2	584.8	585.5	585.4	584.5	583.7	582.8	582.0
170°	586.9	587.6	588.2	588.1	587.3	586.4	585.6	584.7
172.5°	588.9	589.6	590.3	590.2	589.3	588.5	587.6	586.8
175°	591.2	591.8	592.5	592.4	591.4	590.5	589.5	588.6
177.5°	591.4	591.9	592.5	592.4	591.7	591.0	590.3	589.7
180°	590.7	590.7	590.7	590.7	590.7	590.7	590.7	590.7

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