

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: P332898-840

Luminaire Tested: **S124RDIP-S575D365U840-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332898-840
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: S124RDIP-S575D365U840-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 365 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3848.6 lumens
Efficiency: N/A
Efficacy: 139.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Semi-Direct

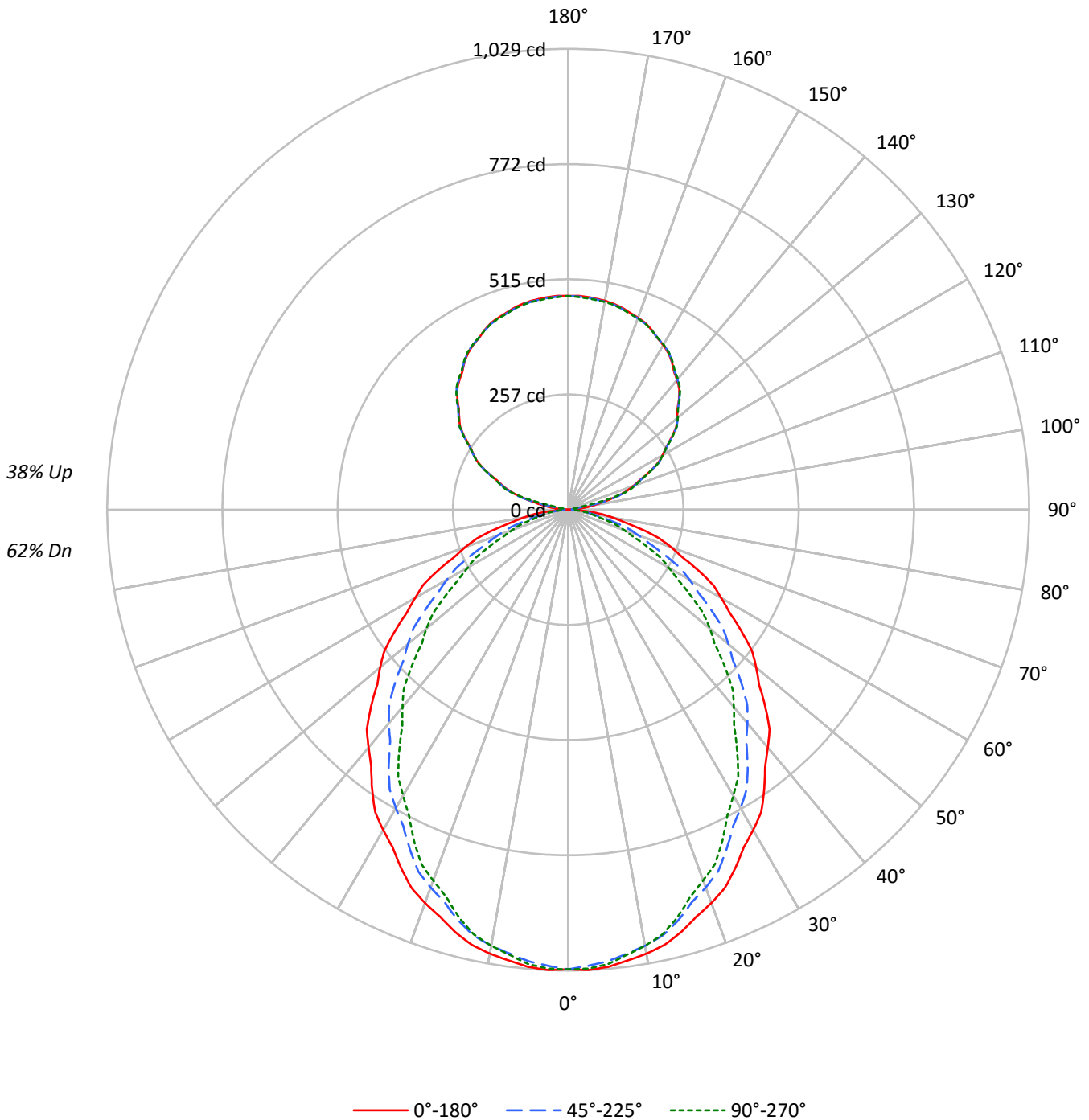
Input Watts (W): 27.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
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	110	110	110	110	103	103	103	103	90	90	90	78	78	78	67	67	67	62
1	101	96	93	89	94	90	87	84	79	77	75	69	67	66	60	58	57	53
2	92	85	79	73	86	80	74	70	70	66	62	61	58	55	53	51	49	45
3	84	75	67	62	79	70	64	59	62	57	53	54	50	47	47	44	42	38
4	77	66	58	52	72	63	55	50	55	50	45	49	44	41	42	39	36	33
5	71	59	51	45	66	56	49	43	50	44	39	44	39	35	38	35	32	29
6	66	53	45	39	61	50	43	38	45	39	34	40	35	31	35	31	28	25
7	61	48	40	35	57	46	38	33	41	35	31	36	31	28	32	28	25	23
8	56	44	36	31	53	42	35	30	37	31	27	33	28	25	29	25	23	20
9	53	40	33	28	49	38	31	27	34	29	25	31	26	22	27	23	20	18
10	49	37	30	25	46	35	29	24	32	26	22	28	24	20	25	21	19	17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8285	8285	8285
5°	8304	8203	8253
10°	8252	8104	8104
15°	8157	7934	7875
20°	8027	7710	7568
25°	7861	7448	7259
30°	7699	7171	6871
35°	7521	6885	6482
40°	7304	6559	6062
45°	7106	6235	5634
50°	6880	5863	5181
55°	6636	5475	4690
60°	6370	5050	4187
65°	6124	4518	3692
70°	5769	3932	3135
75°	5321	3260	2548
80°	4640	2483	2338
85°	3927	2251	2112



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.4	2.5
10°-20°	268.8	7.0
20°-30°	388.2	10.1
30°-40°	440.0	11.4
40°-50°	424.9	11.0
50°-60°	353.4	9.2
60°-70°	244.0	6.3
70°-80°	123.7	3.2
80°-90°	33.1	0.9
90°-100°	16.3	0.4
100°-110°	104.1	2.7
110°-120°	199.1	5.2
120°-130°	252.7	6.6
130°-140°	270.4	7.0
140°-150°	252.8	6.6
150°-160°	203.9	5.3
160°-170°	131.5	3.4
170°-180°	45.3	1.2
0°-30°	753.5	19.6
0°-40°	1193.5	31.0
0°-60°	1971.8	51.2
0°-90°	2372.6	61.6
90°-120°	319.5	8.3
90°-150°	1095.3	28.5
90°-180°	1476.0	38.4
0°-180°	3848.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1026	1026	1026	1026	1026	
5°	1025	1021	1012	1020	1018	97
15°	976	968	949	948	942	275
25°	882	867	836	823	815	406
35°	763	737	699	673	658	477
45°	622	592	546	509	494	480
55°	472	439	389	350	333	422
65°	321	286	236	204	193	317
75°	171	141	104	87	82	180
85°	42	28	24	23	23	48
90°	1	5	8	10	11	3
95°	20	8	8	10	10	25
105°	107	110	111	114	102	112
115°	201	202	201	202	202	197
125°	282	283	283	284	284	252
135°	350	349	351	352	352	269
145°	403	404	404	405	406	252
155°	442	442	442	443	442	204
165°	466	465	465	467	464	132
175°	477	475	475	478	474	45
180°	477	477	477	477	477	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3
2.5°	1028.9	1028.2	1027.7	1027.1	1026.6	1025.5	1024.0	1022.5	1020.9	1019.4	1020.9
5°	1024.7	1024.0	1023.3	1022.6	1022.0	1020.6	1018.4	1016.3	1014.2	1012.2	1013.9
7.5°	1015.4	1014.7	1014.0	1013.3	1012.5	1010.8	1008.0	1005.3	1002.6	999.9	1001.0
10°	1006.6	1005.8	1004.9	1004.0	1003.2	1001.2	998.0	994.8	991.7	988.6	989.3
12.5°	995.3	994.3	993.3	992.3	991.3	989.0	985.2	981.5	977.9	974.1	974.5
15°	976.0	974.4	972.9	971.3	969.7	966.7	962.4	958.1	953.6	949.3	949.0
17.5°	952.6	950.3	948.1	945.7	943.5	939.8	934.5	929.3	924.0	918.8	917.9
20°	934.3	932.1	929.8	927.6	925.2	921.2	915.2	909.3	903.3	897.5	896.1
22.5°	914.2	911.7	909.2	906.6	904.0	899.6	893.2	886.9	880.5	874.1	872.0
25°	882.5	879.4	876.2	873.0	869.9	864.7	857.6	850.4	843.2	836.2	833.1
27.5°	849.2	845.3	841.3	837.4	833.3	827.6	819.9	812.3	804.7	797.0	793.3
30°	825.9	821.5	817.2	812.8	808.5	802.1	794.0	785.8	777.5	769.3	765.0
32.5°	801.4	796.5	791.5	786.6	781.7	775.0	766.5	758.0	749.5	741.0	736.0
35°	763.1	757.5	751.8	746.3	740.7	733.6	724.8	716.1	707.3	698.6	692.7
37.5°	722.1	716.3	710.5	704.8	698.9	691.3	681.6	671.9	662.3	652.6	645.9
40°	693.1	687.3	681.6	675.8	670.0	662.2	652.3	642.3	632.4	622.4	615.0
42.5°	665.4	659.4	653.4	647.3	641.3	633.1	622.7	612.3	602.0	591.6	584.1
45°	622.4	615.9	609.5	603.0	596.5	588.0	577.5	567.1	556.6	546.1	537.6
47.5°	577.9	571.3	564.5	557.8	551.2	542.4	531.5	520.7	509.8	498.9	490.0
50°	547.8	540.9	534.1	527.3	520.5	511.5	500.3	489.2	478.0	466.8	458.1
52.5°	516.9	510.3	503.6	497.0	490.2	481.2	469.7	458.3	446.8	435.4	426.5
55°	471.5	464.5	457.6	450.5	443.5	434.3	423.0	411.7	400.3	389.0	379.9
57.5°	426.6	419.3	412.0	404.8	397.5	388.3	377.1	365.9	354.8	343.6	334.4
60°	394.5	387.5	380.5	373.5	366.6	357.5	346.3	335.1	324.0	312.8	303.7
62.5°	365.6	358.3	351.0	343.8	336.5	327.2	315.7	304.3	292.8	281.3	273.0
65°	320.6	313.2	305.6	298.1	290.5	281.2	270.0	258.9	247.7	236.5	229.0
67.5°	274.0	266.7	259.5	252.4	245.2	236.4	226.0	215.6	205.3	194.9	188.4
70°	244.4	237.0	229.7	222.4	215.1	206.4	196.4	186.5	176.5	166.6	160.9
72.5°	213.0	206.3	199.7	193.1	186.4	178.4	169.1	159.7	150.2	140.8	135.9
75°	170.6	164.1	157.6	151.2	144.7	137.3	129.2	120.9	112.7	104.5	100.5
77.5°	127.4	122.0	116.5	111.0	105.5	99.5	92.8	86.2	79.6	72.9	70.6
80°	99.8	94.7	89.7	84.6	79.6	74.4	69.2	63.9	58.7	53.4	52.9
82.5°	75.9	71.3	66.7	62.0	57.4	53.5	50.5	47.5	44.5	41.5	41.1
85°	42.4	39.0	35.4	31.9	28.5	26.5	26.0	25.4	24.8	24.3	24.0
87.5°	14.6	13.7	12.8	11.8	10.9	10.4	10.4	10.4	10.4	10.4	10.3
90°	1.1	1.9	2.8	3.7	4.5	5.4	6.0	6.6	7.2	7.9	8.3
92.5°	4.5	4.5	4.5	4.6	4.6	5.0	5.7	6.3	7.0	7.6	8.1
95°	19.6	17.0	14.2	11.5	8.9	7.6	7.6	7.7	7.8	7.9	8.3
97.5°	41.7	43.3	45.0	46.8	48.4	44.8	36.0	27.2	18.3	9.4	9.5
100°	58.6	60.0	61.4	62.8	64.2	59.5	48.6	37.6	26.7	15.8	14.3
102.5°	77.4	78.5	79.5	80.5	81.6	81.4	80.0	78.6	77.1	75.6	61.1
105°	107.4	107.9	108.4	108.9	109.4	109.8	110.2	110.6	111.0	111.4	112.1
107.5°	135.3	135.5	135.8	136.0	136.3	136.6	137.2	137.7	138.3	138.9	139.2
110°	154.2	154.4	154.6	154.9	155.1	155.5	155.9	156.4	156.9	157.4	157.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	172.5	172.9	173.3	173.7	174.2	174.5	174.7	174.9	175.1	175.4	175.3
115°	200.6	200.9	201.1	201.3	201.6	201.6	201.6	201.5	201.4	201.3	201.5
117.5°	225.9	226.2	226.5	226.9	227.2	227.4	227.6	227.8	227.9	228.1	228.1
120°	243.1	243.4	243.7	244.0	244.3	244.4	244.4	244.3	244.2	244.1	244.3
122.5°	259.0	259.2	259.4	259.6	259.8	259.9	260.0	260.1	260.2	260.4	260.4
125°	282.0	282.3	282.6	282.9	283.3	283.3	283.2	283.0	282.9	282.7	282.9
127.5°	303.7	303.8	303.8	303.9	304.0	304.2	304.6	304.9	305.3	305.7	305.6
130°	317.6	317.7	317.8	317.9	318.0	318.1	318.3	318.6	318.8	319.1	319.1
132.5°	330.5	330.6	330.7	330.9	331.0	331.2	331.5	331.8	332.1	332.4	332.5
135°	349.7	349.7	349.6	349.5	349.4	349.5	349.9	350.2	350.5	350.8	351.0
137.5°	366.8	366.9	366.9	366.9	367.0	367.2	367.5	367.8	368.2	368.5	368.7
140°	378.0	378.1	378.3	378.4	378.6	378.7	378.9	379.1	379.2	379.4	379.6
142.5°	388.0	388.2	388.5	388.8	389.1	389.3	389.4	389.5	389.6	389.7	389.8
145°	403.3	403.5	403.7	404.0	404.2	404.3	404.3	404.3	404.3	404.3	404.5
147.5°	415.5	416.0	416.4	416.9	417.3	417.5	417.4	417.3	417.2	417.2	417.2
150°	424.3	424.6	425.0	425.4	425.7	425.8	425.7	425.6	425.5	425.5	425.5
152.5°	431.8	432.0	432.3	432.5	432.8	432.8	432.7	432.5	432.4	432.3	432.4
155°	442.2	442.3	442.3	442.4	442.5	442.4	442.2	441.9	441.7	441.5	441.8
157.5°	451.0	450.9	450.9	450.8	450.8	450.6	450.4	450.1	449.8	449.6	450.0
160°	456.2	455.9	455.7	455.4	455.1	455.0	454.9	454.8	454.7	454.6	455.1
162.5°	460.7	460.4	460.1	459.8	459.5	459.3	459.2	459.1	459.1	459.0	459.5
165°	466.5	466.1	465.6	465.2	464.8	464.6	464.6	464.6	464.6	464.6	465.3
167.5°	471.0	470.6	470.2	469.8	469.4	469.2	469.1	469.1	469.0	469.0	469.7
170°	473.6	473.1	472.6	472.2	471.7	471.5	471.6	471.7	471.7	471.8	472.4
172.5°	475.3	474.8	474.3	473.9	473.4	473.2	473.3	473.4	473.4	473.5	474.1
175°	477.2	476.7	476.3	475.7	475.2	475.0	475.1	475.2	475.3	475.3	476.2
177.5°	478.1	477.6	477.2	476.7	476.3	476.1	476.3	476.4	476.5	476.6	477.2
180°	477.2	477.2	477.2	477.2	477.2	477.2	477.2	477.2	477.2	477.2	477.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3	1026.3
2.5°	1022.5	1024.0	1025.5	1026.2	1026.1	1025.9	1025.8	1025.7
5°	1015.6	1017.4	1019.2	1019.9	1019.5	1019.2	1018.8	1018.4
7.5°	1002.1	1003.2	1004.4	1004.6	1004.1	1003.5	1003.0	1002.4
10°	990.0	990.7	991.4	991.4	990.7	990.0	989.3	988.6
12.5°	974.9	975.3	975.8	975.5	974.5	973.6	972.6	971.6
15°	948.6	948.3	947.9	947.2	945.8	944.6	943.4	942.2
17.5°	916.9	915.8	914.8	913.4	911.6	909.8	907.9	906.1
20°	894.6	893.2	891.8	890.0	887.8	885.4	883.2	880.9
22.5°	870.0	867.9	865.8	863.8	861.9	860.1	858.3	856.4
25°	830.2	827.2	824.3	821.9	820.1	818.4	816.7	814.9
27.5°	789.6	786.0	782.3	779.2	776.7	774.2	771.7	769.2
30°	760.6	756.2	751.8	748.3	745.5	742.7	739.9	737.1
32.5°	730.9	725.9	720.7	716.9	714.3	711.7	708.9	706.3
35°	686.7	680.8	674.9	670.3	667.2	664.0	660.9	657.7
37.5°	639.2	632.7	626.0	621.2	617.9	614.8	611.7	608.5
40°	607.7	600.4	593.0	587.8	584.6	581.5	578.3	575.2
42.5°	576.6	569.2	561.7	556.3	553.0	549.8	546.4	543.2
45°	529.1	520.5	511.9	506.0	502.9	499.8	496.7	493.5
47.5°	481.1	472.2	463.3	457.2	453.7	450.3	446.9	443.3
50°	449.3	440.6	431.8	425.9	422.5	419.2	415.9	412.5
52.5°	417.6	408.7	399.9	393.7	390.2	386.8	383.3	379.9
55°	370.8	361.7	352.6	346.5	343.2	339.8	336.5	333.2
57.5°	325.1	315.9	306.7	300.8	298.3	295.8	293.3	290.7
60°	294.6	285.5	276.4	270.5	267.7	264.9	262.2	259.3
62.5°	264.6	256.2	247.8	242.5	240.2	238.0	235.8	233.6
65°	221.6	214.0	206.5	201.7	199.7	197.5	195.4	193.3
67.5°	182.0	175.5	169.1	164.7	162.4	160.1	157.7	155.4
70°	155.1	149.4	143.5	139.8	138.0	136.3	134.5	132.8
72.5°	131.0	126.0	121.1	117.9	116.2	114.6	113.0	111.4
75°	96.4	92.5	88.5	85.9	84.8	83.8	82.8	81.7
77.5°	68.3	65.9	63.5	62.2	61.9	61.6	61.3	61.0
80°	52.4	51.9	51.3	51.0	50.8	50.6	50.5	50.3
82.5°	40.7	40.3	40.0	39.7	39.5	39.3	39.2	39.0
85°	23.6	23.3	22.9	22.8	22.8	22.8	22.8	22.8
87.5°	10.3	10.2	10.2	10.3	10.4	10.6	10.8	10.9
90°	8.8	9.3	9.8	10.1	10.2	10.4	10.5	10.7
92.5°	8.5	9.0	9.5	9.7	9.8	9.8	9.8	9.9
95°	8.8	9.3	9.8	10.0	10.1	10.2	10.3	10.3
97.5°	9.5	9.6	9.6	9.7	9.8	9.8	9.9	10.0
100°	13.0	11.6	10.3	9.7	9.8	9.8	9.9	10.0
102.5°	46.6	32.0	17.5	10.2	10.2	10.2	10.3	10.3
105°	112.8	113.5	114.2	113.1	110.3	107.4	104.5	101.7
107.5°	139.6	139.9	140.3	140.6	140.9	141.2	141.5	141.8
110°	157.7	157.8	158.0	158.2	158.4	158.8	159.0	159.2



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CATALOG NUMBER: S124RDIP-S575D365U840-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	175.3	175.3	175.2	175.4	175.7	176.0	176.3	176.6
115°	201.6	201.8	202.0	202.0	202.0	202.0	202.0	202.0
117.5°	228.0	228.0	228.0	227.9	227.9	227.9	227.9	227.8
120°	244.4	244.6	244.8	244.8	244.6	244.4	244.3	244.1
122.5°	260.5	260.6	260.7	260.7	260.5	260.4	260.2	260.1
125°	283.2	283.4	283.6	283.8	283.9	284.0	284.0	284.1
127.5°	305.6	305.5	305.5	305.4	305.4	305.3	305.2	305.2
130°	319.2	319.3	319.4	319.4	319.4	319.4	319.4	319.4
132.5°	332.6	332.8	332.9	332.9	332.8	332.6	332.6	332.5
135°	351.1	351.3	351.4	351.6	351.7	351.9	352.1	352.2
137.5°	368.9	369.1	369.2	369.3	369.2	369.2	369.1	369.1
140°	379.8	380.1	380.3	380.5	380.6	380.6	380.7	380.8
142.5°	390.0	390.2	390.3	390.4	390.5	390.5	390.5	390.5
145°	404.6	404.7	404.7	404.8	405.0	405.2	405.3	405.5
147.5°	417.3	417.4	417.4	417.5	417.6	417.6	417.7	417.8
150°	425.5	425.5	425.5	425.5	425.6	425.7	425.7	425.8
152.5°	432.5	432.6	432.8	432.8	432.7	432.7	432.7	432.6
155°	442.1	442.4	442.7	442.8	442.5	442.3	442.1	441.8
157.5°	450.4	450.8	451.2	451.2	450.8	450.4	450.0	449.6
160°	455.7	456.2	456.6	456.6	456.2	455.7	455.1	454.6
162.5°	459.9	460.4	460.9	460.8	460.3	459.8	459.2	458.7
165°	466.0	466.6	467.3	467.2	466.5	465.7	465.0	464.3
167.5°	470.4	471.1	471.7	471.7	470.9	470.1	469.3	468.6
170°	473.1	473.7	474.3	474.2	473.5	472.7	471.9	471.1
172.5°	474.8	475.4	476.1	475.9	475.1	474.2	473.4	472.5
175°	476.9	477.6	478.3	478.2	477.2	476.3	475.2	474.3
177.5°	477.7	478.2	478.7	478.5	477.8	477.0	476.3	475.4
180°	477.2	477.2	477.2	477.2	477.2	477.2	477.2	477.2

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