

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: P332543-830

Luminaire Tested: **S124DIP-S575D365U830-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332543-830  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124DIP-S575D365U830-4F0-1E-UDD-F4  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 365 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3583.0 lumens  
Efficiency: N/A  
Efficacy: 130.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: Semi-Direct

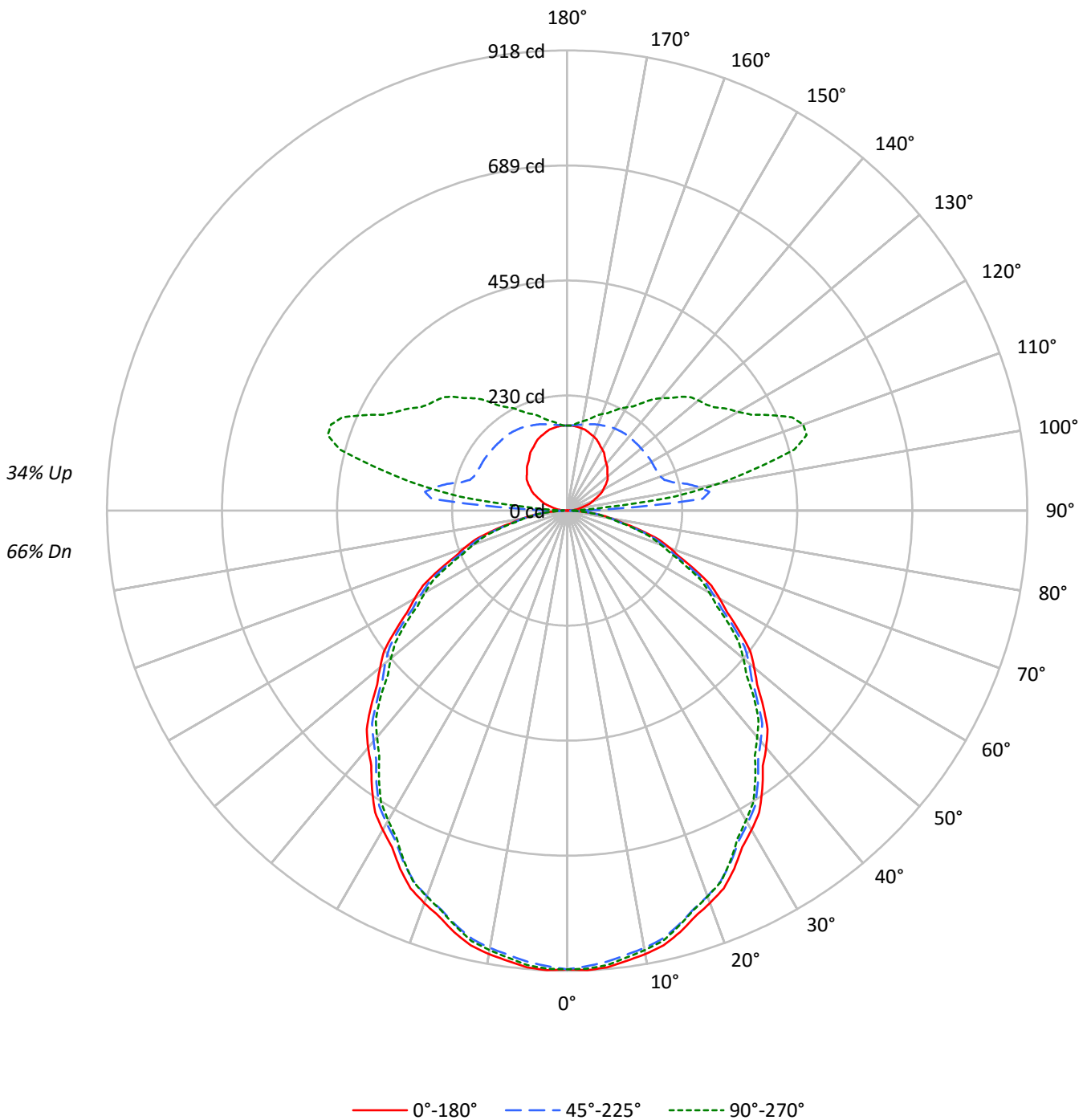
Input Watts (W): 27.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P332543-830

CATALOG NUMBER: S124DIP-S575D365U830-4F0-1E-UDD-F4

### Luminous Intensity Polar Plot





TEST NUMBER: P332543-830

CATALOG NUMBER: S124DIP-S575D365U830-4F0-1E-UDD-F4

**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	111	111	111	111	104	104	104	104	92	92	92	81	81	81	70	70	70	66
1	101	97	93	89	95	91	88	84	81	78	76	71	69	67	62	61	59	55
2	92	85	78	73	86	80	74	69	71	66	63	62	59	56	55	52	50	46
3	84	74	67	61	79	70	63	58	62	57	53	55	51	48	49	45	43	39
4	77	66	58	51	72	62	55	49	56	50	45	49	45	41	43	40	37	34
5	71	59	50	44	66	56	48	42	50	44	39	44	39	35	39	35	32	29
6	65	53	44	38	61	50	42	37	45	39	34	40	35	31	35	31	28	26
7	60	48	40	34	57	45	38	33	41	35	30	36	31	28	32	28	25	23
8	56	43	36	30	53	41	34	29	37	31	27	33	28	25	30	26	23	20
9	52	40	32	27	49	38	31	26	34	28	24	31	26	22	28	23	20	18
10	49	37	29	24	46	35	28	23	32	26	22	29	24	20	26	21	19	17

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	7389	7389	7389
5°	7412	7323	7376
10°	7365	7263	7299
15°	7276	7160	7178
20°	7158	7032	7039
25°	7023	6886	6866
30°	6858	6715	6652
35°	6686	6535	6447
40°	6509	6330	6215
45°	6322	6130	6012
50°	6116	5951	5766
55°	5895	5719	5533
60°	5672	5459	5293
65°	5421	5213	5001
70°	5141	4881	4692
75°	4713	4482	4370
80°	4193	4021	3924
85°	3668	3538	3464



TEST NUMBER: P332543-830

CATALOG NUMBER: S124DIP-S575D365U830-4F0-1E-UDD-F4

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.2	2.4
10°-20°	242.9	6.8
20°-30°	357.5	10.0
30°-40°	415.6	11.6
40°-50°	415.6	11.6
50°-60°	363.5	10.1
60°-70°	270.0	7.5
70°-80°	153.4	4.3
80°-90°	45.2	1.3
90°-100°	122.5	3.4
100°-110°	254.9	7.1
110°-120°	228.3	6.4
120°-130°	192.0	5.4
130°-140°	160.1	4.5
140°-150°	122.3	3.4
150°-160°	86.0	2.4
160°-170°	50.6	1.4
170°-180°	16.5	0.5
0°-30°	686.6	19.2
0°-40°	1102.1	30.8
0°-60°	1881.3	52.5
0°-90°	2349.9	65.6
90°-120°	605.7	16.9
90°-150°	1080.2	30.1
90°-180°	1233.0	34.4
0°-180°	3583.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	915	915	915	915	915	
5°	915	911	904	911	910	87
15°	871	867	857	861	859	245
25°	788	783	773	774	771	363
35°	678	673	663	658	654	424
45°	554	548	537	529	527	427
55°	419	416	406	398	393	375
65°	284	280	273	266	262	281
75°	151	147	144	141	140	161
85°	40	40	38	38	37	44
90°	0	3	6	7	7	3
95°	11	35	272	134	81	12
105°	39	56	218	471	469	42
115°	69	86	195	374	450	68
125°	96	114	194	319	359	85
135°	114	135	192	283	321	88
145°	131	150	191	238	262	82
155°	149	161	186	210	220	69
165°	162	167	178	189	192	46
175°	169	170	171	173	173	16
180°	170	170	170	170	170	



TEST NUMBER: P332543-830

CATALOG NUMBER: S124DIP-S575D365U830-4F0-1E-UDD-F4

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	915.3	915.3	915.3	915.3	915.3	915.3	915.3	915.3	915.3	915.3	915.3
2.5°	917.7	917.3	916.9	916.5	916.2	915.2	913.8	912.4	910.9	909.5	910.8
5°	914.6	914.0	913.3	912.7	912.0	910.8	909.0	907.2	905.4	903.6	905.4
7.5°	906.1	905.4	904.8	904.2	903.5	902.2	900.2	898.2	896.2	894.2	895.7
10°	898.4	897.9	897.2	896.5	895.9	894.5	892.4	890.2	888.2	886.0	887.3
12.5°	888.5	887.9	887.2	886.6	885.9	884.5	882.2	880.0	877.7	875.4	876.8
15°	870.6	870.0	869.3	868.6	868.0	866.5	864.0	861.6	859.1	856.7	857.6
17.5°	849.0	848.2	847.4	846.6	845.7	844.2	841.9	839.6	837.3	835.0	835.6
20°	833.2	832.4	831.6	830.8	829.9	828.3	825.9	823.4	821.0	818.5	819.0
22.5°	816.1	815.1	814.1	812.9	811.9	810.1	807.7	805.2	802.8	800.3	801.3
25°	788.4	787.3	786.2	785.0	783.9	782.2	779.9	777.6	775.3	773.1	773.3
27.5°	756.8	755.6	754.4	753.3	752.1	750.5	748.3	746.2	744.0	742.0	741.6
30°	735.7	734.3	733.0	731.7	730.5	728.7	726.6	724.4	722.4	720.3	719.6
32.5°	713.3	712.2	711.0	709.8	708.7	706.9	704.7	702.5	700.2	698.0	697.2
35°	678.4	677.3	676.2	675.0	673.9	672.1	669.9	667.6	665.3	663.1	661.9
37.5°	641.6	640.6	639.5	638.5	637.4	635.7	633.3	630.8	628.4	625.9	624.7
40°	617.6	616.2	614.9	613.7	612.4	610.5	608.0	605.6	603.1	600.7	599.1
42.5°	591.7	591.0	590.2	589.4	588.6	586.8	584.2	581.5	578.7	576.1	574.2
45°	553.7	552.6	551.5	550.4	549.2	547.3	544.7	542.1	539.5	536.9	535.1
47.5°	514.0	513.2	512.5	511.6	510.9	509.3	506.9	504.4	502.0	499.6	497.6
50°	487.0	486.4	485.7	485.0	484.4	483.0	480.7	478.3	476.1	473.8	471.6
52.5°	460.6	459.9	459.0	458.3	457.5	455.9	453.5	451.1	448.7	446.2	444.2
55°	418.8	418.3	417.8	417.4	416.9	415.5	413.2	410.9	408.6	406.3	404.4
57.5°	378.9	378.3	377.8	377.2	376.6	375.3	373.1	370.8	368.5	366.3	364.4
60°	351.3	350.5	349.7	348.8	348.1	346.6	344.5	342.3	340.3	338.1	336.7
62.5°	324.3	323.7	322.9	322.3	321.6	320.1	317.9	315.7	313.4	311.1	309.8
65°	283.8	283.0	282.2	281.4	280.6	279.4	277.8	276.1	274.5	272.9	271.2
67.5°	243.1	242.3	241.6	240.8	240.1	238.9	237.3	235.8	234.2	232.6	231.1
70°	217.8	216.7	215.6	214.4	213.3	212.1	210.8	209.4	208.1	206.8	205.6
72.5°	190.9	189.7	188.6	187.4	186.2	185.2	184.2	183.1	182.1	181.0	179.9
75°	151.1	150.2	149.5	148.6	147.8	147.0	146.2	145.3	144.6	143.7	143.1
77.5°	113.1	112.7	112.4	112.1	111.7	111.1	110.4	109.7	109.0	108.3	108.0
80°	90.2	89.7	89.3	88.8	88.2	87.8	87.6	87.2	86.9	86.5	86.2
82.5°	68.0	67.7	67.5	67.2	67.0	66.8	66.8	66.7	66.6	66.6	66.4
85°	39.6	39.6	39.6	39.6	39.6	39.4	39.1	38.8	38.5	38.2	38.2
87.5°	15.4	15.4	15.4	15.4	15.3	15.2	15.4	15.3	15.3	15.3	15.2
90°	0.4	1.0	2.0	2.4	2.6	2.6	4.6	4.6	5.4	6.0	5.7
92.5°	3.8	5.6	8.7	12.7	17.6	24.5	41.5	67.3	92.5	105.7	88.0
95°	11.0	12.0	15.4	19.7	27.6	41.7	70.6	125.3	204.9	271.5	279.2
97.5°	19.7	19.7	22.6	26.6	33.5	45.1	67.5	112.6	191.7	286.0	350.7
100°	25.4	25.4	27.6	31.7	38.0	48.6	68.3	105.9	173.9	267.9	353.1
102.5°	30.6	31.2	33.3	36.9	43.1	53.2	71.0	104.1	161.9	245.2	333.1
105°	39.0	40.0	41.7	45.6	51.7	61.3	77.3	104.9	151.6	218.5	296.8
107.5°	48.2	48.8	50.5	54.8	60.5	70.0	84.6	109.9	149.7	203.6	267.5
110°	54.3	55.0	56.6	60.6	66.6	75.6	90.3	113.6	150.2	198.5	252.9



TEST NUMBER: P332543-830

CATALOG NUMBER: S124DIP-S575D365U830-4F0-1E-UDD-F4

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	60.1	60.8	62.8	66.4	72.5	81.4	95.6	117.6	151.8	196.1	244.6
115°	68.6	69.7	71.9	75.3	81.6	90.6	104.0	123.9	154.9	194.9	236.9
117.5°	77.4	78.3	80.4	84.1	90.0	99.3	112.0	130.4	158.2	194.5	233.4
120°	83.3	84.0	86.2	89.9	95.6	104.9	117.6	134.9	160.6	194.5	231.5
122.5°	88.6	89.3	91.6	95.0	101.2	110.3	122.9	139.2	163.0	194.3	229.4
125°	95.6	96.9	99.0	102.6	109.0	118.3	130.3	145.5	166.5	193.9	225.8
127.5°	101.8	102.8	105.3	109.4	116.0	125.5	137.0	151.1	169.5	193.1	221.1
130°	105.3	106.6	109.2	114.2	120.6	130.3	141.6	154.6	171.5	192.8	218.2
132.5°	108.8	109.8	113.3	118.0	124.9	133.9	145.3	158.1	173.4	192.7	215.6
135°	113.6	114.9	118.3	123.9	130.9	139.6	150.5	162.6	176.3	192.2	211.5
137.5°	118.5	119.7	123.4	128.8	136.0	144.3	154.6	165.8	177.9	192.2	208.1
140°	122.0	122.9	126.6	132.2	139.2	147.2	157.2	167.9	179.2	191.9	206.2
142.5°	125.6	126.7	130.1	135.4	142.1	149.9	159.7	169.5	180.3	191.9	204.6
145°	130.9	132.0	135.3	139.9	146.3	153.5	162.2	171.3	180.9	191.2	201.9
147.5°	136.9	137.1	140.2	144.9	150.1	156.7	164.9	172.8	181.3	190.0	199.4
150°	140.5	140.9	143.5	147.6	152.6	158.9	166.3	173.5	181.3	189.2	197.6
152.5°	144.0	144.1	146.8	150.5	155.0	160.8	167.3	174.1	180.7	187.8	195.4
155°	148.9	149.2	151.3	154.6	158.3	163.2	168.9	174.6	179.9	185.9	192.2
157.5°	153.6	153.6	155.5	158.1	161.3	165.2	170.0	174.6	179.0	183.8	189.0
160°	156.6	156.6	157.9	160.2	162.9	166.5	170.6	174.6	178.2	182.2	186.5
162.5°	159.2	159.0	160.0	162.1	164.5	167.4	171.1	174.6	177.4	180.6	184.5
165°	162.2	162.2	162.9	164.6	166.3	168.2	171.3	173.9	175.9	178.2	180.9
167.5°	165.2	164.9	165.2	166.5	167.4	169.0	171.2	173.1	174.3	175.8	177.7
170°	166.5	166.3	166.5	167.6	168.2	169.2	170.9	172.6	173.2	174.2	175.6
172.5°	167.9	167.6	167.6	168.3	168.7	169.5	170.6	172.0	172.2	172.6	173.7
175°	169.2	168.9	168.9	169.2	169.6	169.6	170.2	171.3	170.9	170.9	171.5
177.5°	169.8	169.6	169.3	169.6	169.6	169.6	169.8	170.3	169.8	169.8	170.1
180°	169.6	169.6	169.6	169.6	169.6	169.6	169.6	169.6	169.6	169.6	169.6



TEST NUMBER: P332543-830

CATALOG NUMBER: S124DIP-S575D365U830-4F0-1E-UDD-F4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	915.3	915.3	915.3	915.3	915.3	915.3	915.3	915.3
2.5°	912.1	913.4	914.7	915.3	915.1	915.0	914.9	914.7
5°	907.2	909.0	910.8	911.5	911.2	910.9	910.5	910.2
7.5°	897.1	898.5	899.9	900.6	900.4	900.2	900.0	899.8
10°	888.6	889.9	891.3	891.7	891.4	891.1	890.7	890.4
12.5°	878.4	879.8	881.2	881.7	881.2	880.7	880.3	879.9
15°	858.7	859.6	860.5	860.8	860.4	859.9	859.3	858.8
17.5°	836.2	836.8	837.4	837.5	837.3	836.9	836.6	836.3
20°	819.5	820.0	820.5	820.6	820.2	819.9	819.6	819.3
22.5°	802.1	803.0	803.9	804.0	803.4	802.9	802.3	801.6
25°	773.4	773.5	773.7	773.5	772.8	772.1	771.5	770.8
27.5°	741.2	740.7	740.4	739.8	739.0	738.2	737.4	736.5
30°	719.0	718.3	717.7	716.9	716.0	715.3	714.4	713.6
32.5°	696.4	695.6	694.8	694.0	693.2	692.4	691.5	690.8
35°	660.7	659.6	658.5	657.5	656.7	655.8	655.1	654.2
37.5°	623.5	622.2	620.9	619.8	618.8	617.6	616.6	615.5
40°	597.5	595.8	594.2	593.0	592.1	591.4	590.5	589.7
42.5°	572.3	570.3	568.4	567.2	566.8	566.2	565.6	565.1
45°	533.3	531.5	529.7	528.6	528.1	527.6	527.1	526.6
47.5°	495.6	493.5	491.5	489.9	488.7	487.4	486.2	484.9
50°	469.2	466.9	464.7	463.1	462.0	461.1	460.1	459.1
52.5°	442.1	440.2	438.2	436.5	435.3	434.0	432.8	431.6
55°	402.5	400.5	398.5	397.0	396.1	395.1	394.1	393.1
57.5°	362.6	360.7	358.8	357.4	356.5	355.5	354.6	353.6
60°	335.2	333.8	332.2	331.1	330.3	329.5	328.7	327.8
62.5°	308.5	307.1	305.8	304.7	303.9	303.1	302.3	301.4
65°	269.6	268.0	266.4	265.1	264.3	263.4	262.7	261.8
67.5°	229.5	228.0	226.4	225.5	225.3	225.1	224.8	224.6
70°	204.2	202.9	201.6	200.8	200.2	199.7	199.3	198.8
72.5°	178.9	177.9	176.8	176.1	175.6	175.1	174.7	174.1
75°	142.4	141.8	141.2	140.7	140.5	140.4	140.3	140.1
77.5°	107.8	107.6	107.4	107.2	106.7	106.3	105.8	105.5
80°	85.9	85.6	85.2	85.0	84.8	84.6	84.5	84.4
82.5°	66.2	66.0	65.8	65.6	65.5	65.3	65.1	64.9
85°	38.2	38.2	38.2	38.1	37.9	37.7	37.6	37.4
87.5°	15.3	15.4	15.5	15.5	15.5	15.6	15.5	15.5
90°	6.0	6.3	6.7	6.7	7.0	7.4	7.0	7.0
92.5°	65.4	49.2	39.2	32.5	28.6	26.8	25.6	25.6
95°	246.9	195.2	150.5	118.3	101.9	91.6	85.6	81.2
97.5°	364.7	345.5	312.9	278.1	254.2	234.2	224.2	217.3
100°	401.7	408.4	392.1	367.4	338.5	318.1	308.1	305.5
102.5°	399.9	432.9	437.6	427.3	409.6	394.9	384.4	382.2
105°	373.1	430.7	463.7	477.4	478.1	475.3	470.7	468.7
107.5°	335.1	396.4	442.8	472.6	489.0	496.6	499.9	500.8
110°	312.2	369.8	418.1	454.7	478.3	492.4	498.3	501.3





TEST NUMBER: P332543-830

CATALOG NUMBER: S124DIP-S575D365U830-4F0-1E-UDD-F4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	295.3	346.3	391.9	428.6	455.4	472.4	480.8	485.6
115°	278.5	319.4	358.4	390.4	416.7	436.7	447.4	450.1
117.5°	270.2	304.2	334.8	361.9	384.4	401.1	411.9	414.0
120°	266.5	297.5	324.1	347.8	366.7	381.4	390.1	393.8
122.5°	263.3	293.2	317.4	338.2	354.2	366.7	374.1	377.8
125°	257.9	286.4	309.4	327.8	341.1	350.8	357.1	359.1
127.5°	251.2	278.5	301.5	318.9	332.2	340.8	346.2	348.2
130°	245.8	272.2	294.8	312.5	326.1	334.4	339.8	341.8
132.5°	240.3	264.9	287.1	304.7	318.1	327.5	332.6	334.6
135°	232.5	254.2	274.5	291.2	304.4	313.8	319.1	321.1
137.5°	225.6	243.8	261.0	276.0	288.5	297.7	302.1	304.4
140°	221.5	237.1	252.1	266.2	277.9	285.1	289.8	292.5
142.5°	217.8	231.6	244.4	256.6	266.9	273.7	277.9	279.7
145°	212.5	223.9	233.8	243.2	251.5	257.1	260.5	262.1
147.5°	208.2	217.2	225.2	232.5	238.7	243.6	246.0	246.7
150°	205.6	213.2	219.9	225.8	231.2	235.5	237.5	237.8
152.5°	202.6	209.2	215.4	220.3	224.8	228.3	229.5	229.9
155°	198.2	203.5	208.5	212.5	215.8	218.5	219.5	219.5
157.5°	193.5	197.9	202.2	205.4	207.8	209.9	210.5	210.5
160°	190.6	194.2	197.8	200.6	202.6	204.5	204.9	204.9
162.5°	187.7	190.8	193.6	196.0	197.5	199.4	199.8	199.5
165°	183.5	185.6	187.8	189.5	190.9	192.2	191.9	191.5
167.5°	179.6	181.2	183.0	184.0	184.6	185.6	185.5	185.2
170°	177.2	178.2	179.6	180.6	181.3	181.5	181.3	181.3
172.5°	175.1	175.8	176.6	177.4	177.8	178.0	177.8	177.2
175°	172.2	172.6	173.2	173.2	173.2	173.9	173.2	172.6
177.5°	170.3	170.6	170.6	170.9	170.6	170.9	170.3	169.8
180°	169.6	169.6	169.6	169.6	169.6	169.6	169.6	169.6

(END OF REPORT)