

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: P24191

Luminaire Tested: **S901DIP-2L35-D02XXD**

Issue Date: 3/3/2020

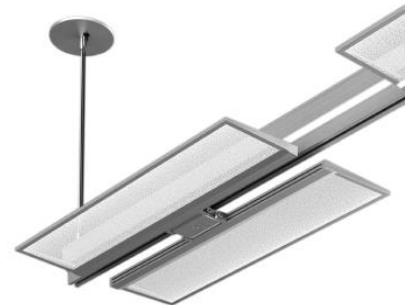
Test Information

Test Method: LM-79-08
Report Number: P24191
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S901DIP-2L35-D02XXD
Description: NEORAY INDEX SUSPENDED WITH 1 FOOT WING YOKE (DOWN)
Light Source: (84) 3500K LEDS
Ballast/Driver: (1) ADVANCE ELECTRONIC DRIVERS
LEDINTA2000C24DO

Summary

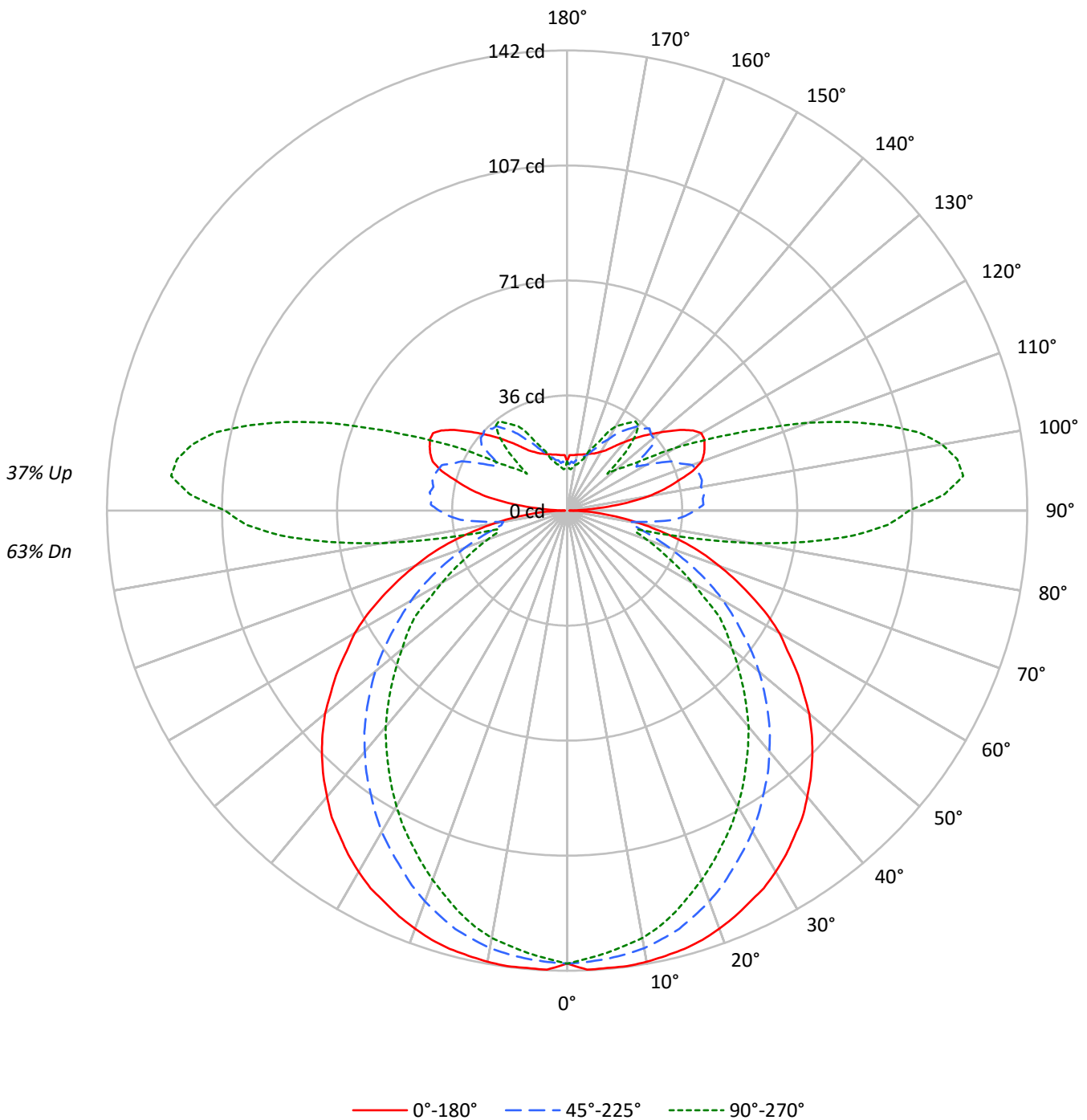
Lumens per Lamp: N/A
Luminaire Lumens: 677.4 lumens
Efficiency: N/A
Efficacy: 76.1 lumens/watt
Spacing Criteria (0/90/45): 1.36 / 1.13 / 1.33
Luminous Opening: Rectangular (W 1.21' x L: 0.88' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 8.9
Input Voltage (V): 120.00
Input Current (Ain): 0.07704
Voltage Rise (V): NR
Power Factor: 0.963
Total Harmonic Distortion (THDi):
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: 24 HR
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	50	30	10	0
RCR																					
0	110	110	110	110	103	103	103	103	91	91	91	79	79	79	68	68	68	63			
1	99	93	88	84	92	87	83	79	76	73	70	66	64	61	57	55	53	49			
2	89	81	74	68	83	76	70	64	66	61	57	58	54	51	50	47	44	40			
3	81	71	63	56	76	67	59	53	58	53	48	51	46	42	44	40	37	34			
4	74	63	54	47	69	59	51	45	52	46	41	45	40	36	39	35	32	29			
5	68	56	47	41	64	53	45	39	46	40	35	41	35	31	35	31	28	25			
6	63	50	41	35	59	47	39	34	42	35	31	37	31	27	32	28	24	22			
7	58	45	37	31	54	43	35	30	38	32	27	33	28	24	29	25	22	19			
8	54	41	33	27	51	39	31	26	35	28	24	31	25	22	27	23	19	17			
9	50	38	30	24	47	36	28	23	32	26	21	28	23	19	25	21	17	15			
10	47	35	27	22	44	33	26	21	29	23	19	26	21	18	23	19	16	14			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1423	1423	1423
5°	1448	1419	1401
10°	1462	1417	1384
15°	1476	1408	1353
20°	1488	1390	1314
25°	1497	1365	1275
30°	1513	1345	1238
35°	1521	1316	1196
40°	1532	1290	1158
45°	1541	1260	1104
50°	1544	1224	1053
55°	1535	1175	1021
60°	1541	1132	908
65°	1515	1070	824
70°	1485	997	777
75°	1444	960	881
80°	1343	1173	3395
85°	1203	3855	10349



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	13.2	2.0
10°-20°	37.7	5.6
20°-30°	56.4	8.3
30°-40°	67.3	9.9
40°-50°	69.1	10.2
50°-60°	61.6	9.1
60°-70°	46.1	6.8
70°-80°	31.5	4.6
80°-90°	45.1	6.7
90°-100°	59.5	8.8
100°-110°	57.4	8.5
110°-120°	43.3	6.4
120°-130°	29.5	4.4
130°-140°	24.6	3.6
140°-150°	18.5	2.7
150°-160°	10.3	1.5
160°-170°	4.9	0.7
170°-180°	1.5	0.2
0°-30°	107.3	15.8
0°-40°	174.7	25.8
0°-60°	305.3	45.1
0°-90°	428.0	63.2
90°-120°	160.2	23.6
90°-150°	232.8	34.4
90°-180°	249.0	36.8
0°-180°	677.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	140	140	140	140	140	
5°	142	140	139	138	137	14
15°	140	138	134	130	128	40
25°	133	129	122	116	114	62
35°	122	116	106	99	96	77
45°	107	99	88	80	77	83
55°	86	79	66	60	58	77
65°	63	56	44	37	34	62
75°	37	32	24	22	22	39
85°	10	13	33	72	89	11
90°	1	15	40	87	106	1
95°	11	19	42	95	123	12
105°	35	32	42	75	102	37
115°	47	41	36	48	56	46
125°	43	42	27	24	25	39
135°	32	34	36	32	26	25
145°	24	26	30	33	33	15
155°	19	20	21	24	24	9
165°	18	18	17	16	16	5
175°	17	16	15	14	13	2
180°	15	15	15	15	15	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	139.8	139.8	139.8	139.8	139.8	139.8	139.8	139.8	139.8	139.8	139.8
2.5°	141.8	141.0	140.9	140.6	140.8	140.5	140.0	139.5	139.3	139.4	139.3
5°	141.7	141.0	140.8	140.5	140.7	140.1	139.8	139.1	138.7	138.9	138.4
7.5°	141.8	140.9	140.8	140.3	140.4	139.7	139.2	138.5	138.2	138.1	137.7
10°	141.4	140.5	140.2	139.8	139.9	139.0	138.4	137.6	137.2	137.1	136.5
12.5°	140.7	139.8	139.6	139.0	138.9	138.1	137.3	136.3	135.7	135.4	134.7
15°	140.0	139.3	138.9	138.2	138.1	137.1	136.0	134.8	134.1	133.6	132.5
17.5°	138.9	138.0	137.6	136.9	136.5	135.3	134.1	132.9	132.0	131.0	129.9
20°	137.3	136.5	136.1	135.2	134.6	133.4	131.9	130.5	129.3	128.3	127.1
22.5°	135.5	134.5	134.0	133.2	132.4	130.9	129.5	127.6	126.5	125.2	123.8
25°	133.3	132.2	131.7	130.9	129.8	128.3	126.4	124.5	123.0	121.5	120.0
27.5°	131.4	130.3	129.6	128.4	127.3	125.5	123.4	121.3	119.8	118.0	116.3
30°	128.7	127.6	127.0	125.7	124.5	122.5	120.1	118.1	116.1	114.4	112.7
32.5°	125.8	124.7	123.8	122.7	121.1	118.9	116.6	114.1	112.3	110.3	108.3
35°	122.4	121.4	120.6	119.3	117.6	115.2	112.5	110.1	108.1	105.9	104.1
37.5°	119.3	118.1	117.1	115.7	113.6	111.4	108.6	106.0	103.9	101.8	99.7
40°	115.3	114.2	113.1	111.6	109.5	107.1	104.4	101.6	99.4	97.1	95.1
42.5°	111.3	110.3	109.1	107.6	105.1	102.7	100.0	97.2	94.8	92.6	90.3
45°	107.0	106.0	104.7	103.0	100.6	98.1	95.1	92.3	90.1	87.5	85.5
47.5°	102.4	101.3	99.8	98.2	95.8	93.1	90.2	87.4	84.9	82.4	80.3
50°	97.5	96.4	94.9	93.1	90.8	88.0	85.0	82.2	79.8	77.3	75.0
52.5°	91.8	91.3	89.8	88.0	85.5	82.7	79.8	77.1	74.6	71.9	69.7
55°	86.5	85.8	84.4	82.4	80.0	77.3	74.5	71.7	68.9	66.2	63.9
57.5°	80.6	80.3	78.6	76.8	74.4	71.7	69.0	65.9	63.3	60.8	58.8
60°	75.7	74.5	73.2	71.2	68.7	66.1	63.4	60.3	57.9	55.6	53.8
62.5°	69.6	68.5	67.3	65.3	63.0	60.6	57.6	54.6	52.4	50.1	48.2
65°	62.9	62.3	60.9	59.0	56.8	54.5	51.6	48.9	46.8	44.4	42.4
67.5°	56.4	56.0	54.5	52.9	51.2	48.8	45.7	43.4	41.3	38.7	37.0
70°	49.9	49.5	48.3	46.7	45.0	42.6	40.1	38.1	35.8	33.5	32.1
72.5°	43.7	42.7	41.7	40.6	38.9	37.0	34.6	32.4	30.6	28.8	27.6
75°	36.7	35.9	35.1	34.3	32.9	31.0	29.1	27.3	25.9	24.4	23.3
77.5°	29.5	29.1	29.1	28.2	26.9	25.5	24.2	22.6	21.7	20.8	20.7
80°	22.9	22.6	22.8	22.1	21.2	20.5	19.4	18.7	18.9	20.0	23.0
82.5°	16.4	16.3	16.4	16.2	16.1	15.8	16.2	17.8	20.9	26.2	33.0
85°	10.3	10.6	11.2	11.3	12.0	14.5	17.5	21.6	25.9	33.0	41.4
87.5°	5.1	5.3	6.3	8.8	12.6	16.2	20.4	24.6	29.9	36.6	46.1
90°	0.7	2.5	6.0	9.5	12.9	16.8	20.7	25.5	32.2	39.5	48.9
92.5°	3.6	4.9	7.8	11.7	15.5	19.5	22.9	28.9	34.0	42.1	52.0
95°	11.2	11.7	11.9	14.7	17.7	21.2	25.8	29.8	36.0	42.0	51.0
97.5°	18.5	19.2	19.0	19.0	20.2	23.7	26.8	31.7	36.0	42.8	50.9
100°	25.6	25.7	24.5	24.5	25.3	26.1	28.7	32.3	36.9	41.9	49.0
102.5°	30.8	31.2	30.2	29.8	28.8	29.0	31.2	34.0	37.3	42.6	49.0
105°	35.4	36.6	35.4	33.1	31.6	32.1	32.3	35.3	38.9	42.4	47.5
107.5°	40.6	41.1	38.7	36.7	34.6	32.7	34.1	35.6	38.0	41.8	46.4
110°	44.2	44.0	42.4	40.6	36.9	34.5	33.3	35.1	38.1	41.1	44.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	45.7	46.6	45.8	42.4	41.0	33.9	33.6	34.0	35.4	37.9	40.8
115°	46.8	48.4	47.1	44.8	42.4	39.5	31.5	31.8	33.6	36.0	38.1
117.5°	47.7	48.3	47.9	45.8	43.7	40.5	36.7	30.2	30.6	32.0	34.0
120°	47.8	47.0	48.0	45.1	44.2	41.7	38.3	32.5	27.1	28.2	29.2
122.5°	46.0	45.5	45.9	44.7	42.9	41.0	39.5	37.0	30.0	25.3	26.0
125°	43.4	44.0	43.5	43.0	42.6	40.5	38.5	37.0	34.0	27.3	22.2
127.5°	40.4	41.5	41.5	40.7	40.5	39.8	38.7	37.9	36.2	33.3	27.8
130°	37.5	38.4	38.8	38.8	38.7	38.2	37.2	36.6	35.7	34.8	33.2
132.5°	34.9	35.3	35.5	36.0	37.1	37.1	37.0	36.9	36.1	35.0	34.2
135°	32.4	32.6	32.7	33.1	34.1	34.4	34.8	35.1	35.4	35.9	34.8
137.5°	30.0	30.3	30.6	31.2	32.2	33.1	33.7	34.1	34.0	34.2	35.4
140°	27.6	28.0	28.4	29.0	29.9	30.7	31.2	32.0	33.3	34.0	33.7
142.5°	25.6	25.9	26.1	26.6	27.5	28.6	30.0	30.8	30.8	31.9	33.1
145°	23.6	23.9	24.3	24.7	25.9	26.6	27.1	27.7	29.4	30.0	31.0
147.5°	22.0	22.4	23.0	23.6	23.9	23.9	24.9	26.6	26.6	27.9	28.4
150°	21.0	21.5	22.1	22.0	22.0	22.8	23.6	23.7	24.9	25.3	26.5
152.5°	20.1	20.8	21.1	20.6	21.2	21.7	21.5	22.4	22.4	23.6	23.8
155°	19.4	20.1	20.0	19.8	20.5	20.2	20.6	20.7	21.2	21.4	22.0
157.5°	19.0	19.6	19.3	19.5	19.5	19.7	19.4	19.7	19.4	19.9	20.4
160°	18.5	18.9	18.7	18.7	18.8	18.7	18.6	18.4	18.7	18.5	18.3
162.5°	18.2	18.4	18.4	18.2	18.4	18.1	17.8	18.0	17.4	17.5	18.0
165°	17.9	17.9	17.9	17.8	17.6	17.8	17.3	16.8	17.1	16.8	16.2
167.5°	17.7	17.6	17.5	17.7	17.4	16.9	17.1	16.7	16.0	15.9	16.1
170°	17.5	17.4	16.9	17.2	17.3	16.8	16.1	16.0	16.0	15.8	15.1
172.5°	17.3	17.3	16.7	16.8	17.0	16.9	16.4	15.6	15.0	14.8	14.8
175°	17.2	17.3	17.0	16.7	16.3	16.1	15.9	15.7	15.4	15.2	14.8
177.5°	17.1	17.3	17.0	16.7	16.4	16.0	15.5	15.1	14.6	14.3	14.1
180°	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	139.8	139.8	139.8	139.8	139.8	139.8	139.8	139.8
2.5°	139.5	138.8	139.1	138.9	138.2	139.1	138.8	138.4
5°	138.7	137.7	137.9	137.8	136.9	137.9	137.3	137.1
7.5°	137.6	136.6	136.7	136.5	135.6	136.2	135.8	135.5
10°	136.3	135.2	135.4	134.9	134.1	134.8	134.3	133.9
12.5°	134.4	133.3	133.3	132.8	131.6	132.3	131.6	131.5
15°	132.2	130.8	130.4	129.8	128.9	129.3	128.6	128.4
17.5°	129.1	127.7	127.3	126.7	125.5	125.8	125.2	124.8
20°	126.3	124.5	124.0	123.1	121.9	122.3	121.7	121.3
22.5°	122.6	120.9	120.4	119.4	118.2	118.5	117.8	117.5
25°	118.8	117.2	116.3	115.3	114.1	114.4	113.6	113.5
27.5°	115.1	113.3	112.5	111.5	110.4	110.5	109.7	109.7
30°	111.3	109.4	108.5	107.5	106.3	106.3	105.5	105.3
32.5°	107.0	105.1	104.1	103.2	101.9	101.8	101.1	100.9
35°	102.5	100.7	99.6	98.5	97.5	97.3	96.4	96.2
37.5°	98.3	96.1	95.3	94.0	92.9	92.7	92.0	91.7
40°	93.5	91.4	90.4	89.3	88.1	88.0	87.2	87.1
42.5°	88.9	86.8	85.6	84.6	83.3	82.9	82.0	81.9
45°	83.7	81.6	80.7	79.2	78.1	77.8	76.9	76.7
47.5°	78.6	76.5	75.2	74.2	72.7	72.4	71.8	71.6
50°	73.2	71.0	69.8	68.5	67.5	67.3	66.6	66.5
52.5°	68.1	65.8	64.7	64.0	62.9	63.0	62.3	62.1
55°	62.4	60.8	60.0	59.1	58.2	58.0	57.6	57.5
57.5°	57.6	55.9	54.9	53.7	52.2	51.7	50.8	50.3
60°	52.5	50.4	48.8	47.3	46.4	45.6	44.9	44.6
62.5°	46.3	44.2	43.2	42.0	40.6	40.2	39.8	39.5
65°	40.7	38.7	37.3	36.6	35.5	35.4	34.6	34.2
67.5°	35.5	34.0	32.8	31.9	31.4	30.8	30.2	30.0
70°	30.9	29.7	28.7	27.8	27.2	26.6	26.3	26.1
72.5°	26.6	25.4	24.6	23.9	23.4	23.1	22.7	22.6
75°	22.5	22.1	22.2	22.2	22.2	22.3	22.4	22.4
77.5°	21.1	22.5	25.9	30.2	34.4	37.5	38.9	39.1
80°	29.0	36.0	42.2	47.9	52.1	55.9	57.3	57.9
82.5°	40.9	48.8	56.7	63.4	67.7	72.7	74.1	74.2
85°	50.3	59.3	68.5	75.3	80.3	85.3	88.1	88.6
87.5°	56.9	67.3	76.9	84.4	91.8	96.0	98.3	99.2
90°	59.9	71.3	81.7	91.5	96.5	102.5	104.7	105.6
92.5°	63.4	76.4	87.8	97.6	106.8	111.5	114.6	116.6
95°	62.4	75.7	88.7	101.4	109.0	116.6	120.8	122.7
97.5°	61.0	73.4	85.4	97.9	108.5	115.8	119.2	121.4
100°	57.9	69.4	82.1	93.7	103.2	110.2	115.0	117.5
102.5°	56.5	65.9	76.0	88.3	96.8	105.6	109.6	111.3
105°	53.7	62.1	71.1	79.8	89.5	95.9	99.6	101.6
107.5°	51.2	57.3	65.0	72.6	79.6	84.8	88.8	90.9
110°	49.1	53.7	58.2	65.3	69.2	74.3	77.8	79.2



TEST NUMBER: P24191

CATALOG NUMBER: S901DIP-2L35-D02XXD

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	44.3	48.9	52.7	56.5	60.6	64.4	65.6	66.5
115°	40.2	42.6	46.9	48.6	52.6	53.8	54.6	55.6
117.5°	36.3	37.7	39.4	42.4	43.5	44.5	45.7	46.4
120°	30.6	32.9	33.5	35.5	35.8	37.4	38.3	38.9
122.5°	26.3	26.9	29.2	28.6	30.3	31.4	31.1	31.1
125°	23.5	23.1	24.4	24.4	26.0	25.5	25.4	25.3
127.5°	19.8	21.0	20.5	21.9	21.6	21.4	21.7	21.9
130°	29.2	22.0	18.4	18.9	18.3	18.9	19.5	19.6
132.5°	33.7	30.5	28.5	21.5	17.1	17.4	17.0	16.8
135°	34.2	34.0	32.1	30.9	29.9	28.0	25.6	25.5
137.5°	35.0	34.8	34.0	34.2	32.7	31.8	31.0	31.1
140°	35.1	34.5	35.3	34.5	33.6	33.8	33.8	34.2
142.5°	33.4	34.1	34.5	34.0	34.6	35.3	34.6	34.7
145°	31.7	32.7	32.5	33.4	34.0	33.6	32.8	33.0
147.5°	30.1	30.0	31.3	31.7	31.2	31.1	31.2	31.4
150°	26.9	28.0	29.1	28.6	29.0	29.4	29.7	30.0
152.5°	24.8	25.7	25.5	26.2	27.1	27.5	27.1	27.3
155°	22.7	22.5	23.5	24.2	24.0	23.7	23.2	23.5
157.5°	20.4	20.8	21.6	21.0	20.9	21.0	21.1	21.3
160°	19.1	19.2	18.8	18.8	19.1	19.3	19.3	19.4
162.5°	17.6	17.1	17.5	17.8	17.9	17.5	16.8	16.7
165°	16.3	16.6	16.7	16.3	16.0	15.8	15.5	15.7
167.5°	16.1	15.6	15.2	14.8	14.8	14.7	14.6	14.7
170°	14.7	14.5	14.6	14.5	14.6	14.5	14.2	14.3
172.5°	14.9	14.8	14.6	14.2	14.0	13.8	13.4	13.4
175°	14.4	14.0	13.8	13.3	13.2	12.9	12.7	12.8
177.5°	14.0	13.7	13.6	13.5	13.3	13.2	12.9	13.0
180°	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2

(END OF REPORT)