



Spectra Lux

2750 Sabourin, Saint-Laurent (Quebec) H4S 1M2 Canada
Tel.: (514) 332-0082 Fax: (514) 332-3590 www.spectralux.ca



Lab Code: 200899-0

Moving Mirror Goniophotometer Test Report

Standard(s): IES LM-79:2019, ANSI C82.2:2002, ANSI C82.77-10-20, ANSI C82.77

Customer Luminaire Authentik, 1122 rue du sud, Cowansville, Quebec, Canada, J2K 2Y3

General Information		Lamp Details: CY5136		Driver Details: CY2398	
DUT Lab ID	SRIS 3130-1	Seasoning	0 Hour	Type	LED Power Supply
Lamp Type	LED/SSL	Test Product	Danoise 24	Manufacturer	Tala
Current Mode	AC	Manufacturer	Tala	Catalog No.	Integrated
Test Report	S2205092-R1	Lamp Catalog No.	(1) 6 Watts E26 Coated LED Bulb Tala Sphere II	Maximum Power	6 W
Test Date	9 May 2022	Drive Current	N.K.	Input Voltage	120.00 V
Report Date	20 May 2022	Nominal Color	2800 K	Operating Frequency	60 Hz
Ambient	24.9 °C	Burning Position	Junction Vertical Base Up	Input Power	6.08 W

Luminaire Data

General Information		Optics		Aperture (feet)	
Manufacturer	Luminaire Authentik	Optics	White Painted Dune 24 Shade	X	-2.0000
Name	Danoise 24	Housing	White Painted Aluminum Dune Shade (24"Dx6"H)	Y	-2.0000
Catalog No.	Danoise 24	Lens	GB 10WN Opalin Globe	Z	0.4167

Stabilization Time: 1 hour

Approved Signatory: Chrisnel Blot

Signature:



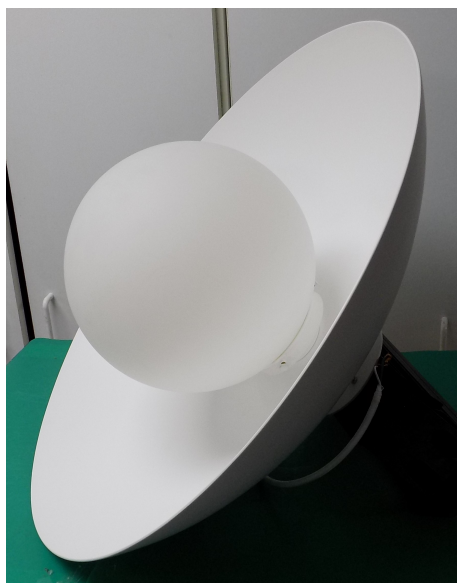
Luminaire Test Method

Precise installation and alignment of the luminaire to the rotation axis of the photometer is governed by a servomotor controlled via a microcontroller. A laser is used to validate the luminaire positioning. Before photometric measurements are taken, luminaire is operated long enough to reach stabilization and temperature equilibrium.

All movement commands issued to the photometer axes are mediated by the software to ensure the motion is within the limits of operation. The photometric detector used is a silicon detector corrected to closely match the spectral luminous efficiency photopic curve with a quality index less than 1.5%. Proper shielding is incorporated to the photometric test bench such that only the light from the unit under test is measured.

Luminous intensity measurements are performed at a distance great enough so that the inverse-square law applies. During each measurement the computer records the luminous intensity associated to the corresponding angles of radiation, as well as input electrical operational parameters and temperature measurements. Candela values are reported in IES format as per LM-63.

Equipment, reference standards are traceable to National Institute of Standards and Technology (NIST) and National Research Council of Canada (NRC).





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Electrical Equipment

Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due Date
Power Supply	Inventfine	CHP-500	GZBXD010148	N.P.C.R.	N.P.C.R.
Input Power Meter	Yokogawa	WT210	27E116584	2021/09/20	2022/09/22
Output Power Meter	N/A	N/A	N/A	N.P.C.R.	N.P.C.R.

Photometric Equipment

Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due Date
Photometer	N/A	N/A	N/A	N.P.C.R.	N.P.C.R.
Photodetector	INPHORA	IPR-PDET 19	110802	2021/09/05	2022/09/05

Environment Equipment

Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due Date
Temperature Humidity Sensor	Omega	HH311	120504176	2021/07/13	2022/07/13

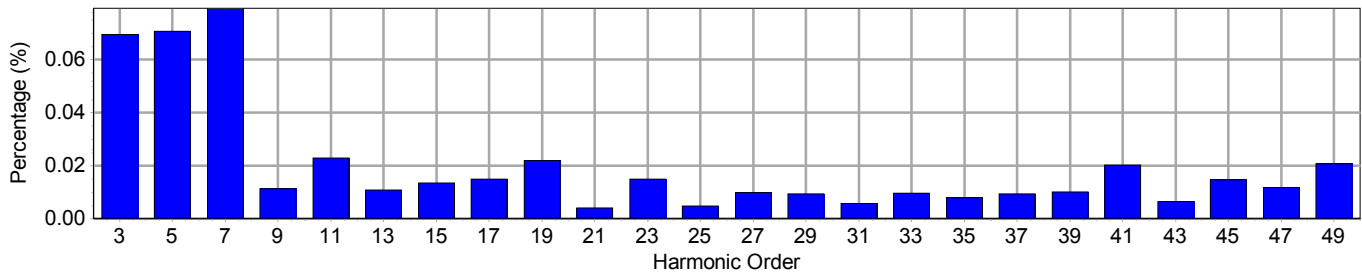


Electrical Measurements

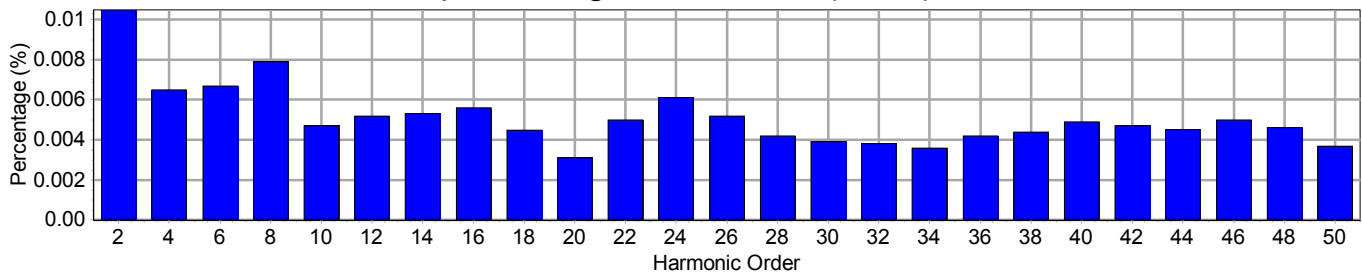
Input

Frequency	60 Hz	Active Power	6.08 W	THDV [ANSI]	0.14 %
Voltage	120.0 V(rms)	Apparent Power	6.66 VA	THDA [ANSI]	44.58 %
Current	0.0555 A(rms)	Power Factor	0.912	Max. Harmonic At	3rd order

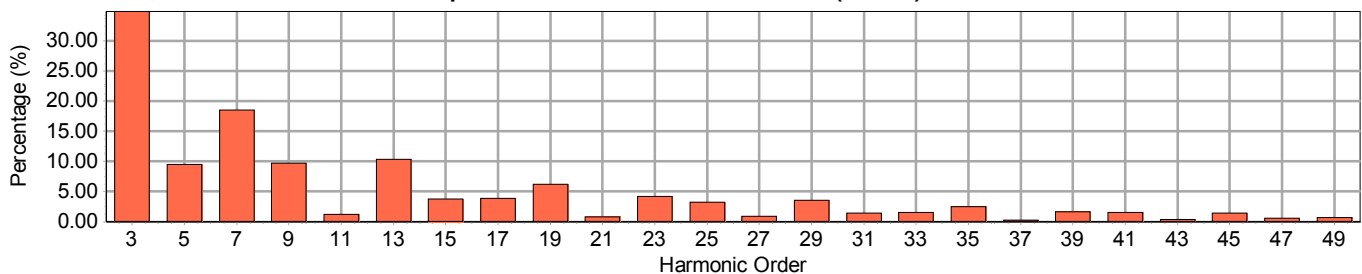
Input Voltage Harmonics (Odd)



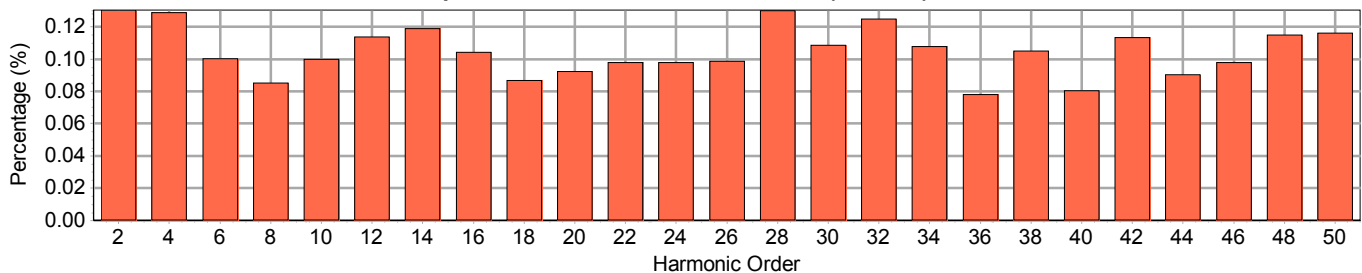
Input Voltage Harmonics (Even)



Input Current Harmonics (Odd)



Input Current Harmonics (Even)





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Harmonic Measurements

Odd Harmonics				Even Harmonics			
Harmonic Order	Frequency (HZ)	Voltage Harmonics (%)	Current Harmonics (%)	Harmonic Order	Frequency (HZ)	Voltage Harmonics (%)	Current Harmonics (%)
1	60	100.000	100.000	2	120	0.011	0.131
3	180	0.069	34.994	4	240	0.007	0.129
5	300	0.071	9.472	6	360	0.007	0.101
7	420	0.079	18.578	8	480	0.008	0.085
9	540	0.011	9.721	10	600	0.005	0.100
11	660	0.023	1.264	12	720	0.005	0.114
13	780	0.011	10.374	14	840	0.005	0.119
15	900	0.014	3.747	16	960	0.006	0.104
17	1020	0.015	3.882	18	1080	0.005	0.087
19	1140	0.022	6.212	20	1200	0.003	0.092
21	1260	0.004	0.793	22	1320	0.005	0.098
23	1380	0.015	4.190	24	1440	0.006	0.098
25	1500	0.005	3.277	26	1560	0.005	0.099
27	1620	0.010	0.868	28	1680	0.004	0.130
29	1740	0.009	3.584	30	1800	0.004	0.109
31	1860	0.006	1.450	32	1920	0.004	0.125
33	1980	0.010	1.562	34	2040	0.004	0.108
35	2100	0.008	2.503	36	2160	0.004	0.078
37	2220	0.009	0.310	38	2280	0.004	0.105
39	2340	0.010	1.665	40	2400	0.005	0.081
41	2460	0.020	1.496	42	2520	0.005	0.114
43	2580	0.007	0.424	44	2640	0.005	0.090
45	2700	0.015	1.393	46	2760	0.005	0.098
47	2820	0.012	0.633	48	2880	0.005	0.115
49	2940	0.021	0.656	50	3000	0.004	0.116



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Photometric Report: S2205092-R1

Prepared for: Luminaire Authentik · Test Date: 09 May 2022

Luminaire: Danoise 24 · Lumcat: Danoise 24

Coefficients of Utilization - Zonal Cavity Method

RCR	RC				0.9				0.8				0.7				0.5			0.1			0
	RW	0.7	0.5	0.3	0.1	0.7	0.5	0.3	0.1	0.7	0.5	0.3	0.1	0.5	0.3	0.1	0.5	0.3	0.1	0.5	0.3	0.1	0
0		121	121	121	121	118	118	118	118	114	114	114	114	108	108	108	97	97	97	97	97	97	94
1		107	100	94	88	104	97	91	86	100	94	89	84	89	84	81	79	76	74	79	76	74	71
2		96	85	76	68	93	82	74	67	89	80	72	66	75	69	63	67	63	59	67	63	59	56
3		87	73	63	55	83	71	62	54	80	69	60	53	65	57	51	58	53	48	58	53	48	45
4		79	64	53	45	76	62	52	45	73	60	51	44	57	49	43	51	45	40	51	45	40	38
5		72	57	46	38	69	55	45	38	67	54	44	37	51	42	36	45	39	34	45	39	34	32
6		66	51	40	33	64	49	39	32	61	48	39	32	45	37	31	41	35	30	41	35	30	27
7		61	46	36	29	59	44	35	28	57	43	34	28	41	33	27	37	31	26	37	31	26	24
8		57	41	32	25	55	40	31	25	53	39	31	25	37	30	24	34	28	23	34	28	23	21
9		53	38	29	22	51	37	28	22	49	36	28	22	34	27	22	31	25	21	31	25	21	19
10		50	35	26	20	48	34	26	20	46	33	25	20	32	24	19	29	23	19	29	23	19	17

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Luminaire
0 - 10	10	2.17	2.17
10 - 20	28	6.30	6.30
20 - 30	44	9.87	9.87
30 - 40	56	12.55	12.55
40 - 50	63	14.17	14.17
50 - 60	65	14.67	14.67
60 - 70	62	14.00	14.00
70 - 80	54	12.11	12.11
80 - 90	37	8.32	8.32
90 - 120	25	5.62	5.62
90 - 130	25	5.68	5.68
90 - 150	26	5.78	5.78
90 - 180	26	5.85	5.85
0 - 180	443	100.00	100.00

Average Luminance (Cd/m²)

Angle	0 Degree	45 Degree	90 Degree
45.0	395	395	395
55.0	435	435	435
65.0	508	508	508
75.0	677	677	677
85.0	1336	1336	1336

Luminaire Luminous Flux: 443

Measured Input Power: 6.08 W

Total Luminaire Efficiency: N/A

Luminaire Luminous Efficacy: 72.9 lm/W

Luminaire Spacing Criterion (0 Degree): 1.3572

Luminaire Spacing Criterion (90 Degree): 1.3572

Category: Up and Down

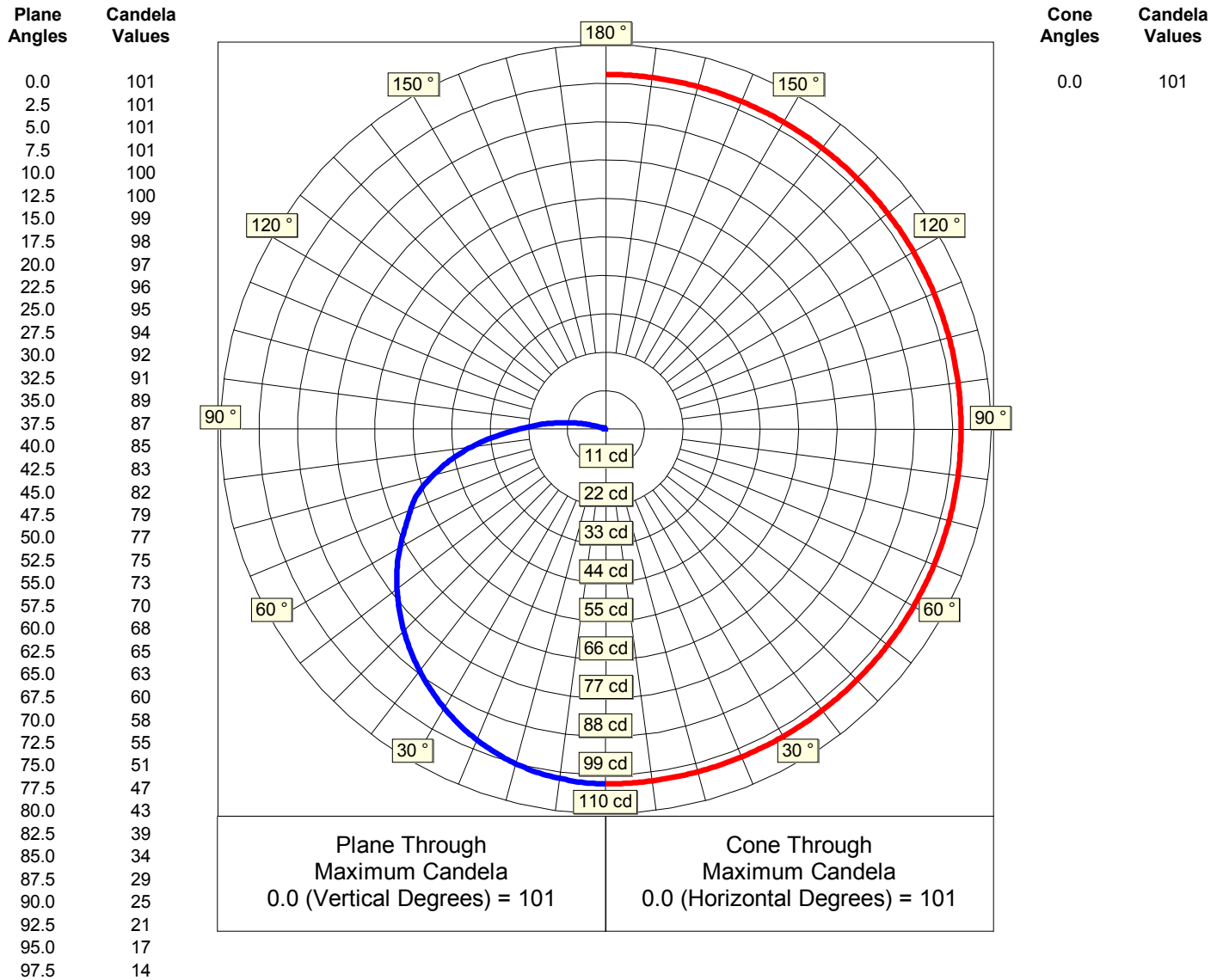


Photometric Report: S2205092-R1

Prepared for: Luminaire Authentik · Test Date: 09 May 2022

Luminaire: Danoise 24 · Lumcat: Danoise 24

Luminous Intensity - Polar Curve for each Plane(1)





Photometric Report: S2205092-R1

Prepared for: Luminaire Authentik · Test Date: 09 May 2022

Luminaire: Danoise 24 · Lumcat: Danoise 24

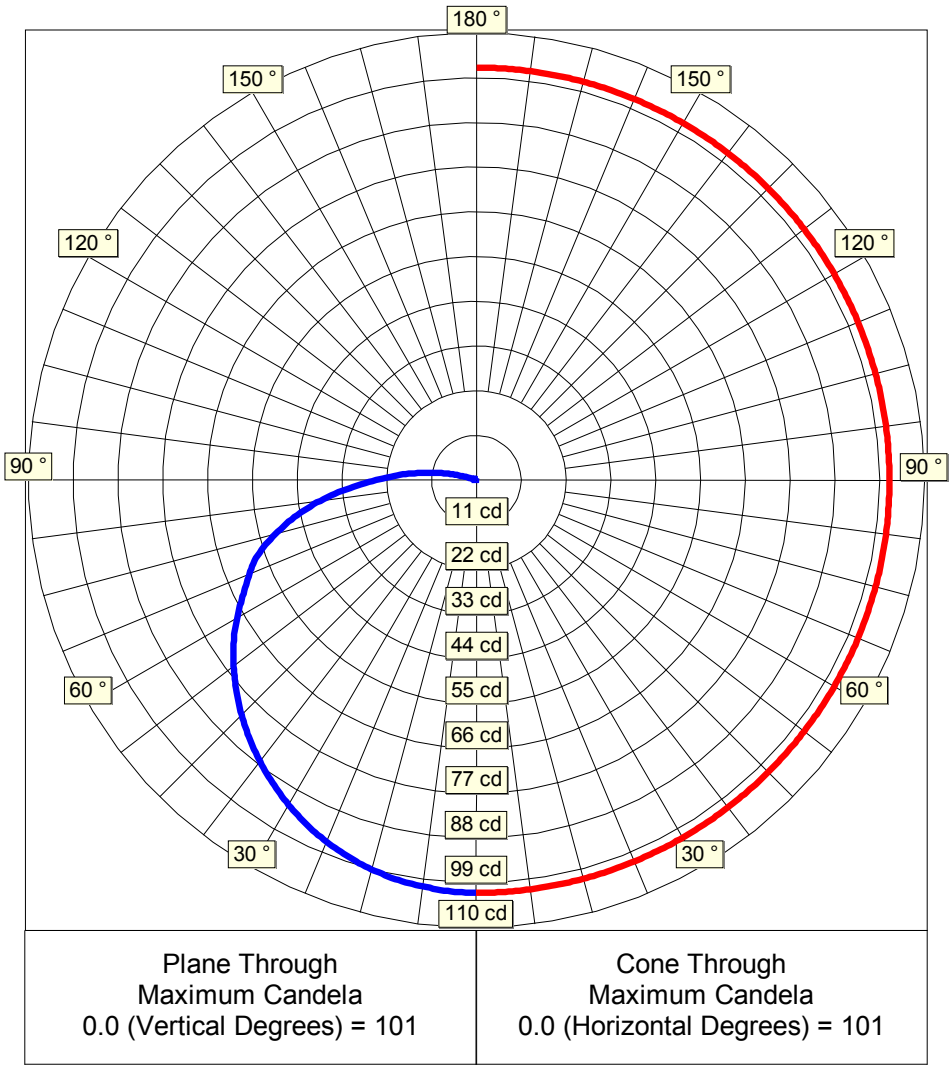
Luminous Intensity - Polar Curve for each Plane(2)

Plane
Angles

100.0
102.5
105.0
107.5
110.0
112.5
115.0
117.5
120.0
122.5
125.0
127.5
130.0
132.5
135.0
137.5
140.0
142.5
145.0
147.5
150.0
152.5
155.0
157.5
160.0
162.5
165.0
167.5
170.0
172.5
175.0
177.5
180.0

Candela
Values

11
8
5
3
1
0
0
0
0
0
0
0
0
0
0
0
0
0
0
0
0
0
0
0
0
0
0
0
0
0
0



Cone
Angles

0.0

Candela
Values

101



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IES File Headers

IESNA:LM-63
[ISSUEDATE] 09 May 2022
[TESTLAB] Spectra Lux
[TEST] S2205092-R1
[MANUFAC] Luminaire Authentik
[LUMCAT] Danoise 24
[LUMINAIRE] Danoise 24
[LAMP] (1) 6 Watts E26 Coated LED Bulb Tala Sphere II c/w Integrated LED Driver @ 120.00V
[_BURNING] Vertical Base Up (443 Luminaire Lumens)
[_OPTICS] White Painted Dune 24 Shade
[_LENS] GB 10WN Opalin Globe
[_HOUSING] White Painted Aluminum Dune Shade (24"Dx6"H)
[_NOMINAL COLOR] 2800 K
[_DRIVE CURRENT] N.K.

Candela Table

Lateral Angles

	0.0
V e r t i c a l	0.0
	101
	2.5
	101
	5.0
	101
	7.5
	101
	10.0
	100
	12.5
	100
	15.0
	99
	17.5
	98
	20.0
A n g l e s	97
	22.5
	96
	25.0
	95
	27.5
	94
	30.0
	92
	32.5
	91
	35.0
	89
	37.5
	87
	40.0
	85
	42.5
	83
	45.0
	82
	47.5
	79
	50.0
	77
	52.5
	75
	55.0
	73
	57.5
	70
	60.0
	68
	62.5
	65
	65.0
	63
	67.5
	60
	70.0
	58
	72.5
	55
	75.0
	51
	77.5
	47
	80.0
	43
	82.5
	39
	85.0
	34
	87.5
	29
	90.0
	25



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Lateral Angles

	0.0
	92.5
	95.0
	97.5
	100.0
	102.5
	105.0
	107.5
	110.0
	112.5
V e r t i c a l	115.0
	117.5
	120.0
	122.5
	125.0
	127.5
	130.0
	132.5
	135.0
	137.5
A n g l e s	140.0
	142.5
	145.0
	147.5
	150.0
	152.5
	155.0
	157.5
	160.0
	162.5
	165.0
	167.5
	170.0
	172.5
	175.0
	177.5
	180.0