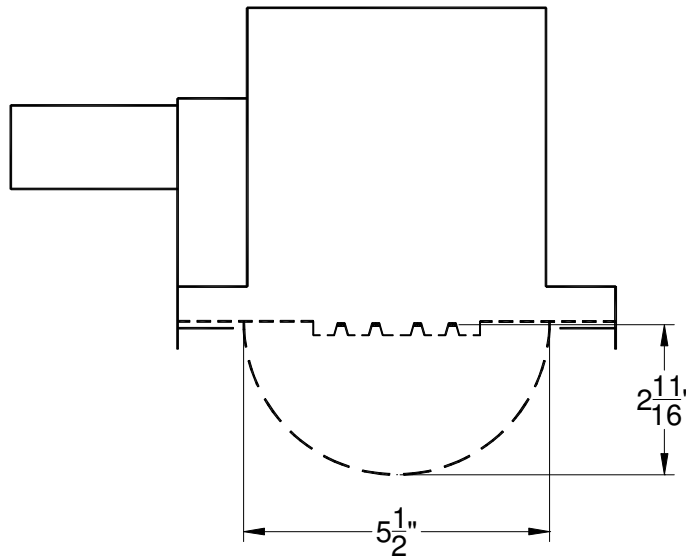




INDEPENDENT TEST LABORATORY REPORT No. 29023

SOLAR OUTDOOR LIGHTING - LED OUTDOOR AREA LUMINAIRE, CAT# GREENWAY
WITH ALUMINUM INTERIOR AND CLEAR PLASTIC BOWL LENS
FOUR LED ARRAYS. LUMINAIRE OUTPUT: 1832 Lms.
ONE SOL aiSUN SC350-D200 CONTROLLER OPERATING AT 13.0 VDC AND 19.1 WATTS

IESNA CUTOFF CLASSIFICATION: CUTOFF



PREPARED FOR:

SOLAR OUTDOOR LIGHTING INC
PALM CITY, FL

DATE: MAY 12, 2011

CERTIFIED BY:

Ryder Tunney

LABORATORY RESULTS MAY NOT BE REPRESENTATIVE OF FIELD PERFORMANCE.
BALLAST FACTORS HAVE NOT BEEN APPLIED

TESTED IN 30 PLANES LEFT SIDE, 30 PLANES RIGHT SIDE, LEFT AND RIGHT AVERAGED

VERTICAL TEST INCREMENTS ARE 2.5 DEGREES.

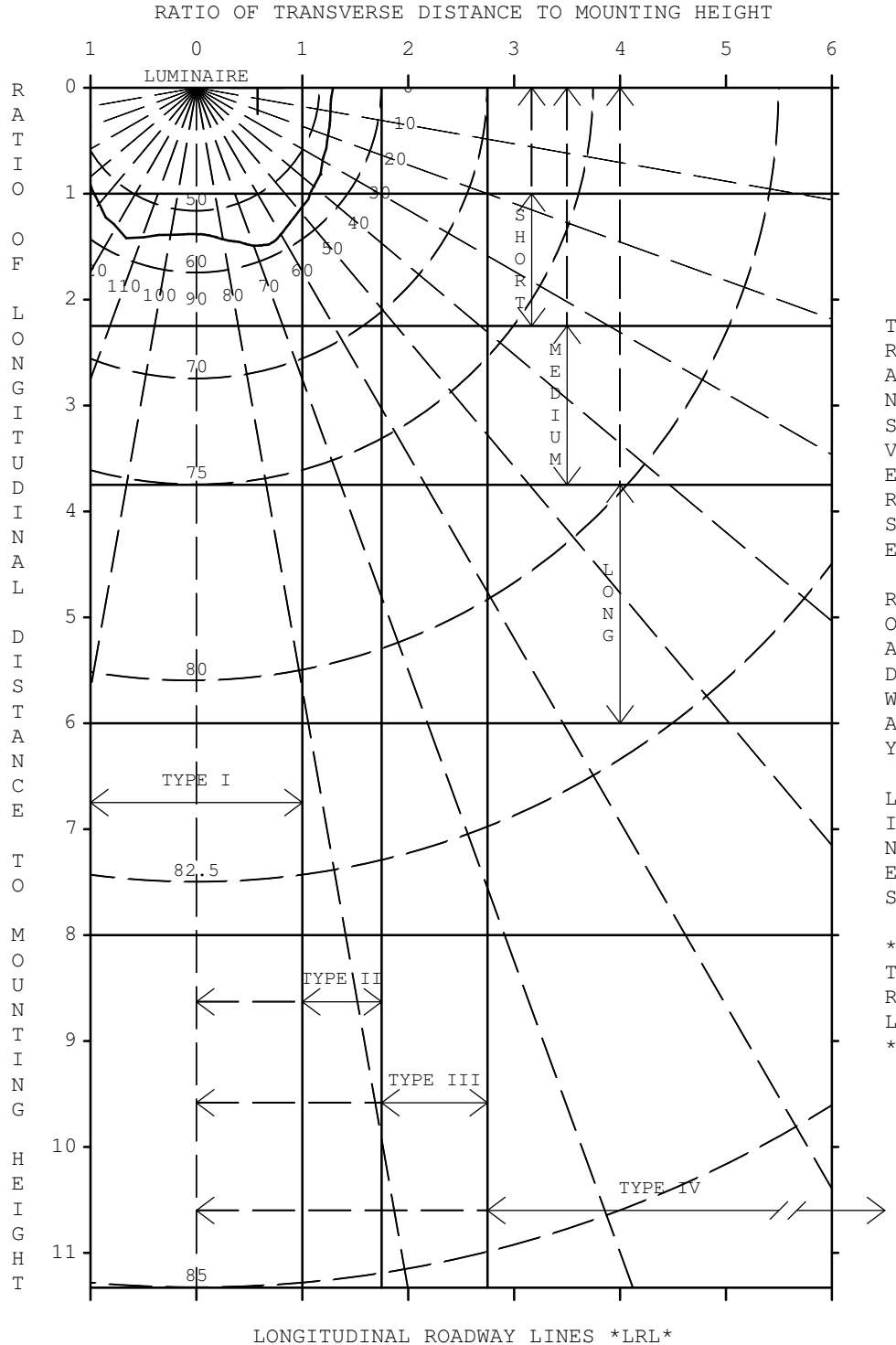
TEST DISTANCE EXCEEDS FIVE TIMES THE GREATEST
LUMINOUS OPENING OF LUMINAIRE.

LIGHTING SCIENCES, INC.

7826 E. EVANS RD.
SCOTTSDALE, AZ, USA 85260

CERTIFIED TEST REPORT NO.29023

SOLAR OUTDOOR LIGHTING - LED OUTDOOR AREA LUMINAIRE, CAT# GREENWAY
WITH ALUMINUM INTERIOR AND CLEAR PLASTIC BOWL LENS
FOUR LED ARRAYS. LUMINAIRE OUTPUT: 1832 Lms.
ONE SOL AISUN SC350-D200 CONTROLLER OPERATING AT 13.0 VDC AND 19.1 WATTS



NOTE:
CONTOUR LINE
IS FOR 50%
OF THE MAXIMUM
INTENSITY

IES ROADWAY CLASSIFICATION: TYPE II, VERY SHORT

LIGHTING SCIENCES, INC.
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INDEPENDENT TEST LABORATORY REPORT No. 29023

SOLAR OUTDOOR LIGHTING - LED OUTDOOR AREA LUMINAIRE, CAT# GREENWAY
WITH ALUMINUM INTERIOR AND CLEAR PLASTIC BOWL LENS
FOUR LED ARRAYS. LUMINAIRE OUTPUT: 1832 Lms.
ONE SOL aiSUN SC350-D200 CONTROLLER OPERATING AT 13.0 VDC AND 19.1 WATTS

*** THIS IS AN ABSOLUTE TEST REPORT ***

UTILIZATION TABLE

CO-EFFICIENT OF UTILIZATION

RATIO	HOUSE SIDE	STREET SIDE	TOTAL
0.5	0.256	0.264	0.520
1.0	0.422	0.437	0.859
1.5	0.472	0.497	0.969
2.0	0.481	0.509	0.990
2.5	0.483	0.511	0.995
3.0	0.484	0.512	0.996
3.5	0.484	0.512	0.996
4.0	0.484	0.512	0.996
5.0	0.484	0.513	0.997
TOTAL:	0.485	0.513	0.998

PERCENTAGE OUTPUTS

DOWNWARD:	STREET SIDE =	51.3%
	HOUSE SIDE =	48.5%
	TOTAL =	99.8%
UPWARD:	STREET SIDE =	0.1%
	HOUSE SIDE =	0.1%
	TOTAL =	0.2%

EFFICACY (LUMENS PER WATT) 96.4

THE ABOVE COEFFICIENTS HAVE BEEN CALCULATED BASED ON LUMINAIRE LUMENS
BECAUSE IN AN ABSOLUTE TEST THE BARE LAMP LUMENS ARE UNKNOWN.
LIGHTING DESIGN CALCULATIONS MADE USING THESE COEFFICIENTS SHOULD
THEREFORE USE THE LUMINAIRE LUMENS IN THE CALCULATION FORMULA

LIGHTING SCIENCES, INC.
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ZONAL LUMEN SUMMARY PER IES PUBLICATION TM-15-07

*** THIS IS AN ABSOLUTE TEST REPORT ***

FORWARD LIGHT:

LUMENS	939.8
% LUMENS	51.3 %
FORWARD LOW ZONE (0 TO 30 DEGREES)	15.5 %
FORWARD MID ZONE (30 TO 60 DEGREES)	31.4 %
FORWARD HIGH ZONE (60 TO 80 DEGREES)	4.3 %
FORWARD VERY HIGH ZONE (80 TO 90 DEGREES)	0.0 %

BACK LIGHT:

LUMENS	888.3
% LUMENS	48.5 %
BACK LIGHT LOW ZONE (0 TO 30 DEGREES)	15.0 %
BACK LIGHT MID ZONE (30 TO 60 DEGREES)	29.6 %
BACK LIGHT HIGH ZONE (60 TO 80 DEGREES)	3.7 %
BACK LIGHT VERY HIGH ZONE (80 TO 90 DEGREES)	0.1 %

UPLIGHT:

LUMENS	4.1
% LUMENS	0.2 %
UPLIGHT LOW ZONE (90 TO 100 DEGREES)	0.2 %
UPLIGHT HIGH ZONE (100 TO 180 DEGREES)	0.0 %

TRAPPED LIGHT: NOT APPLICABLE TO AN ABSOLUTE TEST

LIGHTING SCIENCES, INC.
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WITH ALUMINUM INTERIOR AND CLEAR PLASTIC BOWL LENS
FOUR LED ARRAYS. LUMINAIRE OUTPUT: 1832 Lms.
ONE SOL aiSUN SC350-D200 CONTROLLER OPERATING AT 13.0 VDC AND 19.1 WATTS

IES "BUG" RATING (BACK LIGHT, UPLIGHT, GLARE)
PER ADDENDUM TO IES TM-15-07

	LUMENS	SECONDARY SOLID ANGLE RATING
BACK LIGHT		
BH (60-80 DEGREES)	68.6	B0
BM (30-60 DEGREES)	542.8	B1
BL (0-30 DEGREES)	275.7	B1
UPLIGHT		
UH (100-180 DEGREES)	0.0	U1
UL (90-100 DEGREES)	4.1	U1
FVH (80-90 DEGREES)	0.7	U0
BVH (80-90 DEGREES)	1.2	U0
GLARE LIGHT		
FVH (80-90 DEGREES)	0.7	G0
BVH (80-90 DEGREES)	1.2	G0
FH (60-80 DEGREES)	79.1	G0
BH (60-80 DEGREES)	68.6	G0

IES BUG RATING: B1 U1 G0

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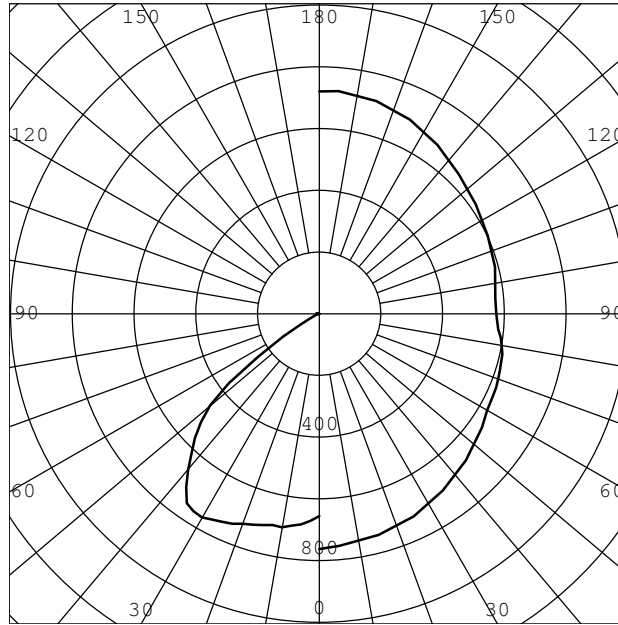
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SOLAR OUTDOOR LIGHTING - LED OUTDOOR AREA LUMINAIRE, CAT# GREENWAY
 WITH ALUMINUM INTERIOR AND CLEAR PLASTIC BOWL LENS
 FOUR LED ARRAYS. LUMINAIRE OUTPUT: 1832 Lms.
 ONE SOL aiSUN SC350-D200 CONTROLLER OPERATING AT 13.0 VDC AND 19.1 WATTS

INTENSITY (CANDLEPOWER)
 IN MAX. PLANE

INTENSITY (CANDLEPOWER)
 IN MAX. CONE

ANGLE	CANDLEPOWER
0.0	655
5.0	685
10.0	702
15.0	709
20.0	724
25.0	744
30.0	762
35.0	749
40.0	661
45.0	571
50.0	462
52.5	370
55.0	241
57.5	139
60.0	73
62.5	39
65.0	24
67.5	20
70.0	13
72.5	6
75.0	4
77.5	3
80.0	1
82.5	0
85.0	0
87.5	1
90.0	2
95.0	15
105.0	0
115.0	0
125.0	0
135.0	0
145.0	0
155.0	0
165.0	0
175.0	0
180.0	0



ANGLE	CANDLEPOWER
0.0	762
5.0	755
15.0	742
25.0	725
35.0	699
45.0	673
55.0	644
60.0	628
62.5	624
65.0	623
67.5	621
70.0	616
72.5	614
75.0	611
77.5	607
80.0	600
82.5	592
85.0	583
87.5	577
90.0	573
95.0	573
105.0	590
115.0	603
125.0	620
135.0	639
145.0	668
155.0	694
165.0	714
175.0	724
180.0	720

MAXIMUM INTENSITY (CANDLEPOWER) : 762 CD
 PLANE OF MAXIMUM: 0.0
 VERTICAL ANGLE OF MAXIMUM: 30.0

LIGHTING SCIENCES, INC.
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SOLAR OUTDOOR LIGHTING - LED OUTDOOR AREA LUMINAIRE, CAT# GREENWAY
WITH ALUMINUM INTERIOR AND CLEAR PLASTIC BOWL LENS
FOUR LED ARRAYS. LUMINAIRE OUTPUT: 1832 Lms.
ONE SOL AISUN SC350-D200 CONTROLLER OPERATING AT 13.0 VDC AND 19.1 WATTS

INTENSITY (CANDLEPOWER) SUMMARY

VERT. ANGLE	HORIZONTAL ANGLES - STREET SIDE										
	0.0	5.0	15.0	25.0	35.0	45.0	55.0	65.0	75.0	85.0	90.0

0.0	655	655	655	655	655	655	655	655	655	655	655
5.0	685	683	681	680	678	674	668	660	655	653	653
10.0	702	699	697	695	685	675	671	671	657	647	647
15.0	709	703	699	693	690	684	672	659	655	630	630
20.0	724	718	708	697	690	679	666	658	643	619	619
25.0	744	738	733	719	703	671	654	643	632	604	604
30.0**	762	755	742	725	699	673	644	623	611	583	583
35.0	749	739	732	721	696	664	629	596	582	558	558
40.0	661	649	652	662	668	644	609	569	548	527	527
45.0	571	560	562	568	580	596	575	533	502	485	485
50.0	462	451	461	473	485	500	522	490	452	433	433
55.0	241	237	270	326	382	406	426	433	400	374	374
60.0	73	71	83	114	194	285	320	350	326	304	304
65.0	24	24	25	32	50	104	200	237	243	226	226
70.0	13	12	12	14	13	20	57	133	151	143	143
75.0	4	4	3	4	3	4	5	27	61	66	66
80.0	1	1	2	1	1	1	0	2	3	2	2
85.0	0	0	1	1	0	0	0	0	0	0	0
90.0	2	3	6	13	5	1	1	1	0	0	0

VERT. ANGLE	HORIZONTAL ANGLES - HOUSE SIDE										
	90.0	95.0	105.0	115.0	125.0	135.0	145.0	155.0	165.0	175.0	180.0
0.0	655	655	655	655	655	655	655	655	655	655	655
5.0	652	652	651	652	652	651	652	656	659	662	661
10.0	644	643	641	640	653	663	666	670	676	680	678
15.0	626	628	630	644	657	668	673	673	677	680	674
20.0	612	614	620	638	649	655	662	677	684	690	684
25.0	598	599	614	622	636	649	667	683	698	707	703
30.0**	573	573	590	603	620	639	668	694	714	724	720
35.0	546	547	561	580	605	633	668	693	721	729	722
40.0	515	515	528	551	581	620	654	661	644	637	619
45.0	472	467	490	511	553	586	563	534	526	519	508
50.0	423	422	444	470	503	477	446	417	390	376	361
55.0	370	372	384	415	409	360	310	249	194	168	154
60.0	298	295	314	333	285	219	133	83	65	55	50
65.0	222	217	232	219	157	68	34	23	21	22	21
70.0	140	137	139	108	39	13	13	13	12	12	11
75.0	64	62	51	18	3	3	3	2	3	4	3
80.0	1	2	2	1	0	0	1	1	1	1	1
85.0	0	0	0	0	0	0	1	4	1	1	0
90.0	0	0	0	1	3	5	8	12	11	8	8

** DENOTES VERTICAL ANGLE OF MAXIMUM CONE

**** DENOTES LATERAL ANGLE OF MAXIMUM PLANE

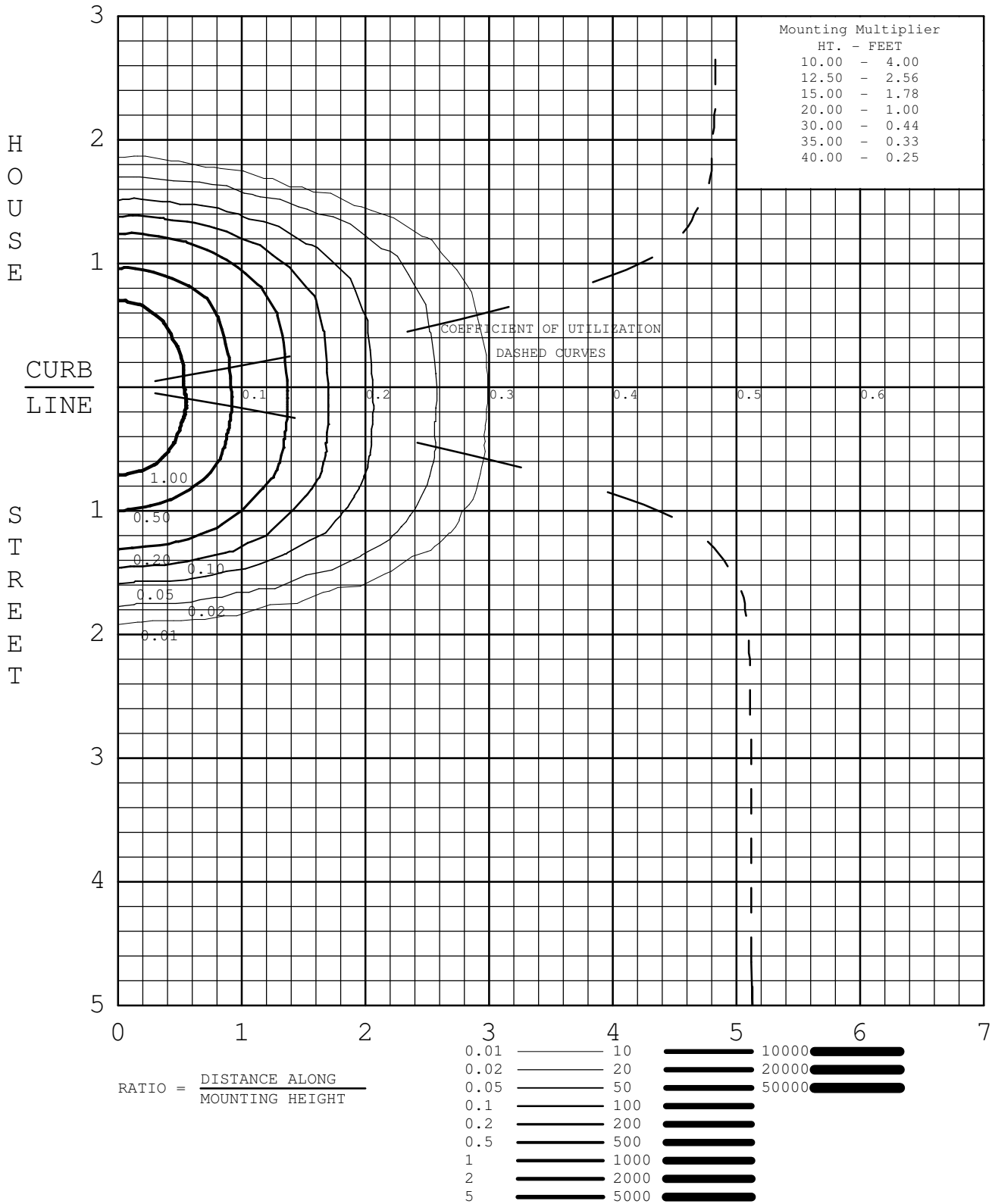
INTENSITY WAS MEASURED IN 2.5 DEGREE STEPS - TABULATIONS ARE AVAILABLE

ISOFOOTCANDLE

CERTIFIED TEST REPORT NO.29023

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 WITH ALUMINUM INTERIOR AND CLEAR PLASTIC BOWL LENS
 FOUR LED ARRAYS. LUMINAIRE OUTPUT: 1832 Lms.
 ONE SOL aiSUN SC350-D200 CONTROLLER OPERATING AT 13.0 VDC AND 19.1 WATTS

MOUNTING HEIGHT FOR ISOFC 20.0 FEET



LIGHTING SCIENCES, INC.
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INDEPENDENT TEST LABORATORY REPORT No. 29023

** ILLUMINANCE(FOOTCANDLE) TABLE FOR SINGLE LUMINAIRE AT 20.0 FT. **

LATERAL RATIOS	ILLUMINANCE(FOOTCANDLE) TABLE FOR SINGLE LUMINAIRE AT 20.0 FT.														
-3.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	.001	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
-2.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	.002	.002	.001	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
-2.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	.006	.005	.004	.002	.001	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000
-1.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	.051	.047	.029	.015	.008	.004	.002	.001	.000	.000	.000	.000	.000	.000	.000
-1.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	0.44	0.34	0.17	.076	.032	.013	.005	.003	.001	.000	.000	.000	.000	.000	.000
-0.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	1.2	0.86	0.36	0.13	.051	.020	.008	.004	.002	.001	.000	.000	.000	.000	.000
HOUSE															
	CURB LINE														
STREET	1.6	1.0	0.41	0.15	.055	.022	.009	.004	.002	.001	.000	.000	.000	.000	.000
0.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	1.3	0.90	0.38	0.14	.053	.021	.009	.004	.002	.001	.000	.000	.000	.000	.000
1.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	0.50	0.37	0.19	.086	.037	.016	.007	.003	.001	.001	.000	.000	.000	.000	.000
1.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	.080	.066	.043	.022	.012	.006	.003	.001	.001	.000	.000	.000	.000	.000	.000
2.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	.008	.007	.005	.003	.002	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000
2.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	.002	.002	.002	.001	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
3.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	.001	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
3.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
4.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
4.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
5.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0
	LONGITUDINAL MOUNTING HEIGHT RATIOS														

CORRECTION FACTORS FOR OTHER MOUNTING HEIGHTS: SEE ISOFOOTCANDLE PAGE