

# Report of Test LL24640

Western Power. Product ID: 80 W Mercury Vapour Roadster Body with 80 W MV Lamp.  
Cast aluminium body with white and raw finish and black plastic gear cover, overall extents ~ 465 x 275 x 125 mm deep. Clear bowl lens with prismatic ribbing forms luminous volume of 313 x 270 x 75 mm deep.  
Specular hammertone reflectors about lamp. One Sylvania HSL-BW-80W lamp centred in L/V.  
One Tridonic.Atco OMB80-03 250V 50Hz magnetic ballast.  
Tested at 240 V 50 Hz. Spigot mount in C270 position.

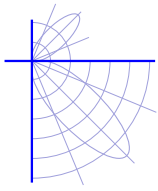


## Performance Summary

Luminous Flux	2299 lm
Total Luminaire Power	84.3 W
Luminous Efficacy	27.3 lm / W

**Prepared for: Western Power, 363 Wellington Street, Perth, WA 6000.**

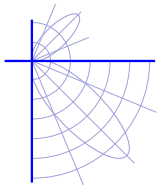
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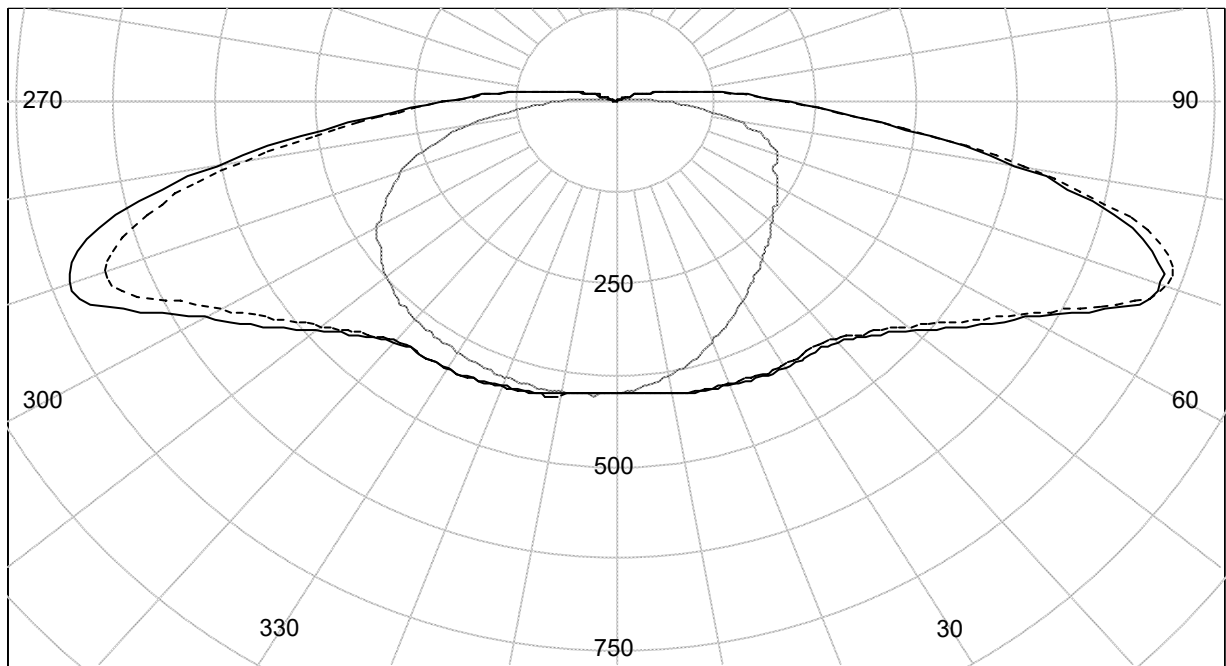
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**Polar Light Distribution Curves**



Kerbside / Downstream

C0-Solid, Plane of maximum-Dashed, C90-Grey (cd)  
C0 aligned towards oncoming traffic

Streetside / Upstream

**Street Lantern Summary:**

Report data as tested.

	Luminous Flux (lm)		
	Upward	Downward	Total
Street Side	46.8	1072	1119 lm
House Side	50.2	1130	1180 lm
Total Luminous Flux			2299 lm

Certified by:

Toby Southgate  
Authorised Signatory

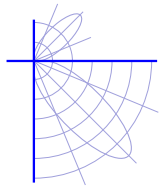
Date of test

8-May-2023

Date of report

05-Jun-2023





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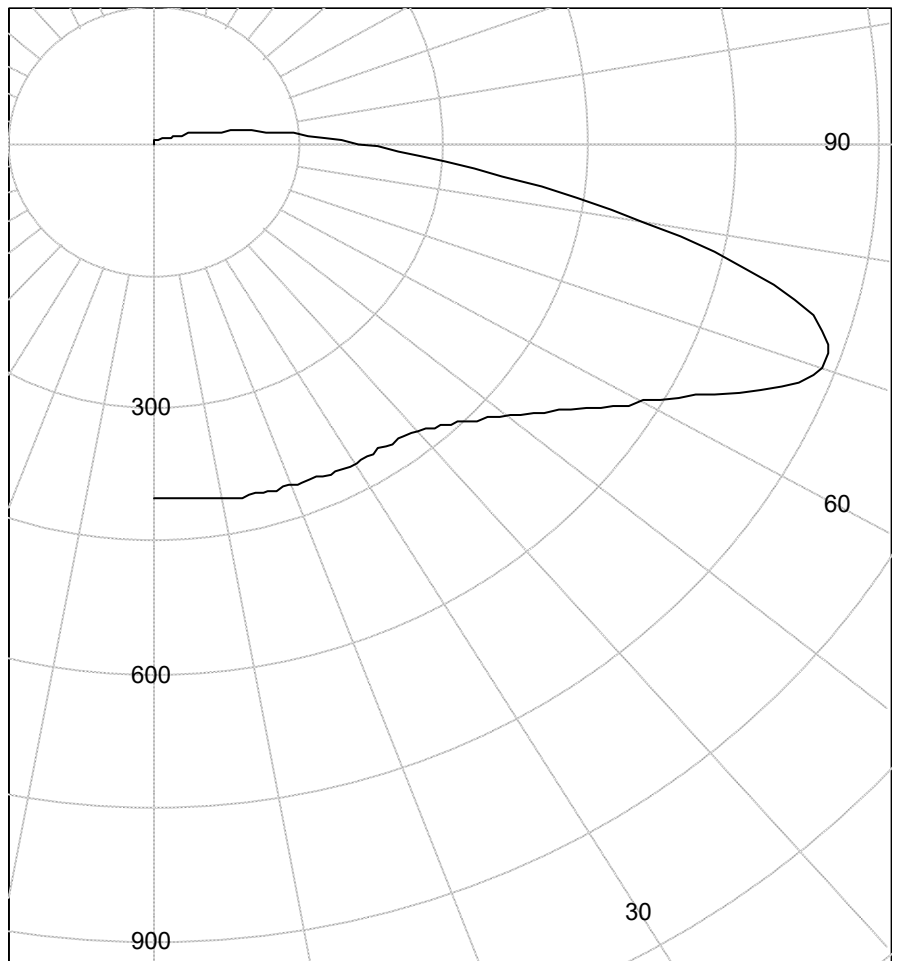
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Luminous intensity  
in principal plane

Gamma (°)	Intensity (cd)
0.0	399.9
10.0	406.0
20.0	411.8
30.0	417.7
35.0	417.8
40.0	424.9
45.0	445.1
47.5	460.4
50.0	479.1
52.5	500.4
55.0	526.3
57.5	554.3
60.0	583.1
62.5	618.6
65.0	669.0
67.5	711.5
70.0	734.5
72.5	726.5
75.0	684.3
77.5	609.8
80.0	515.9
82.5	422.7
85.0	332.1
87.5	263.9
90.0	210.7
92.5	170.2
95.0	131.3
97.5	97.0
100.0	70.6
102.5	52.7
105.0	39.9
120.0	4.0
135.0	0.0
150.0	0.0
165.0	0.0
180.0	0.0

**Principal Vertical Plane**



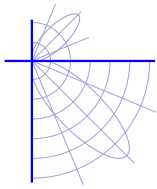
Legend: Plane of maximum luminous intensity (cd)

	Maximum luminous intensity
House Side	725.4 cd @ (0.0, 69.5)
Street Side	735.2 cd @ (7.5, 70.5)

Note: The coordinate pairs in the above table are expressed in degrees and have the format (C plane, Gamma angle).

Data for the two symmetric halves of the luminaire has been averaged.





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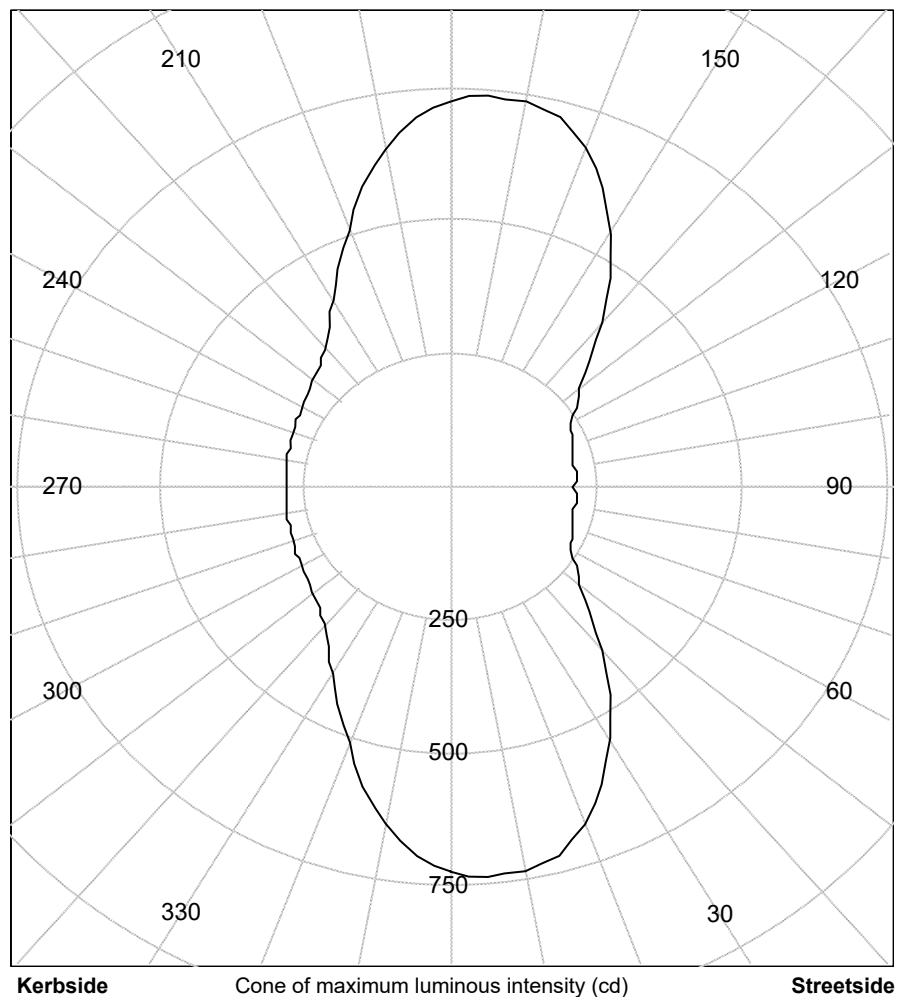
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Luminous intensity  
in principal cone

C-Plane (°)	Intensity (cd)
90.0	213.0
75.0	218.0
60.0	237.1
50.0	288.5
45.0	336.5
40.0	405.4
35.0	479.9
30.0	548.3
25.0	615.9
20.0	679.1
15.0	717.0
10.0	733.1
5.0	734.3
0.0	723.6
355.0	696.9
350.0	644.3
345.0	582.8
340.0	513.5
335.0	454.4
330.0	409.2
325.0	367.9
320.0	336.3
315.0	318.8
310.0	307.7
300.0	294.0
285.0	286.8
270.0	282.6

**Principal Conical Surface**

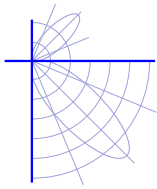


House Side Maximum luminous intensity  
725.4 cd @ (0.0, 69.5)

Street Side 735.2 cd @ (7.5, 70.5)

Note: The coordinate pairs in the above table are expressed in degrees and have the format (C plane, Gamma angle).  
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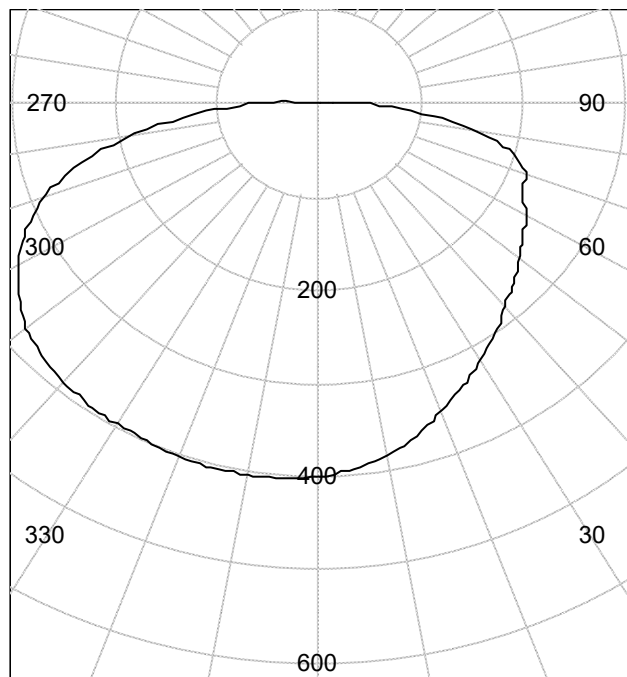
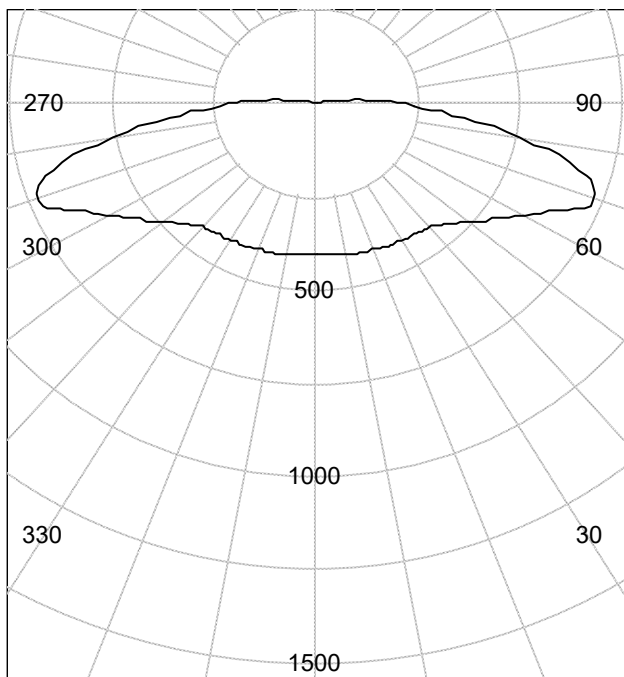
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**Polar curve through CIE C0 / C180**

**Polar curve through CIE C90 / C270**



**Downstream**  
**(C180)**

(cd)

**Upstream**  
**(C0)**

**Kerbside**  
**(C270)**

(cd)

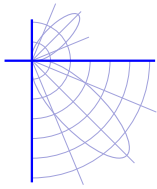
**Streetside**  
**(C90)**

**Performance Parameters**

$I_{80}$	=	504.8	cd
$I_{88}$	=	254.8	cd
$I_{90}$	=	217.5	cd
$I_{80} / I_{88}$	=	1.981	

Note: The intensity values listed ( $I_{xx}$ ) are all within the C0 half plane, the subscript refers to the gamma angle.





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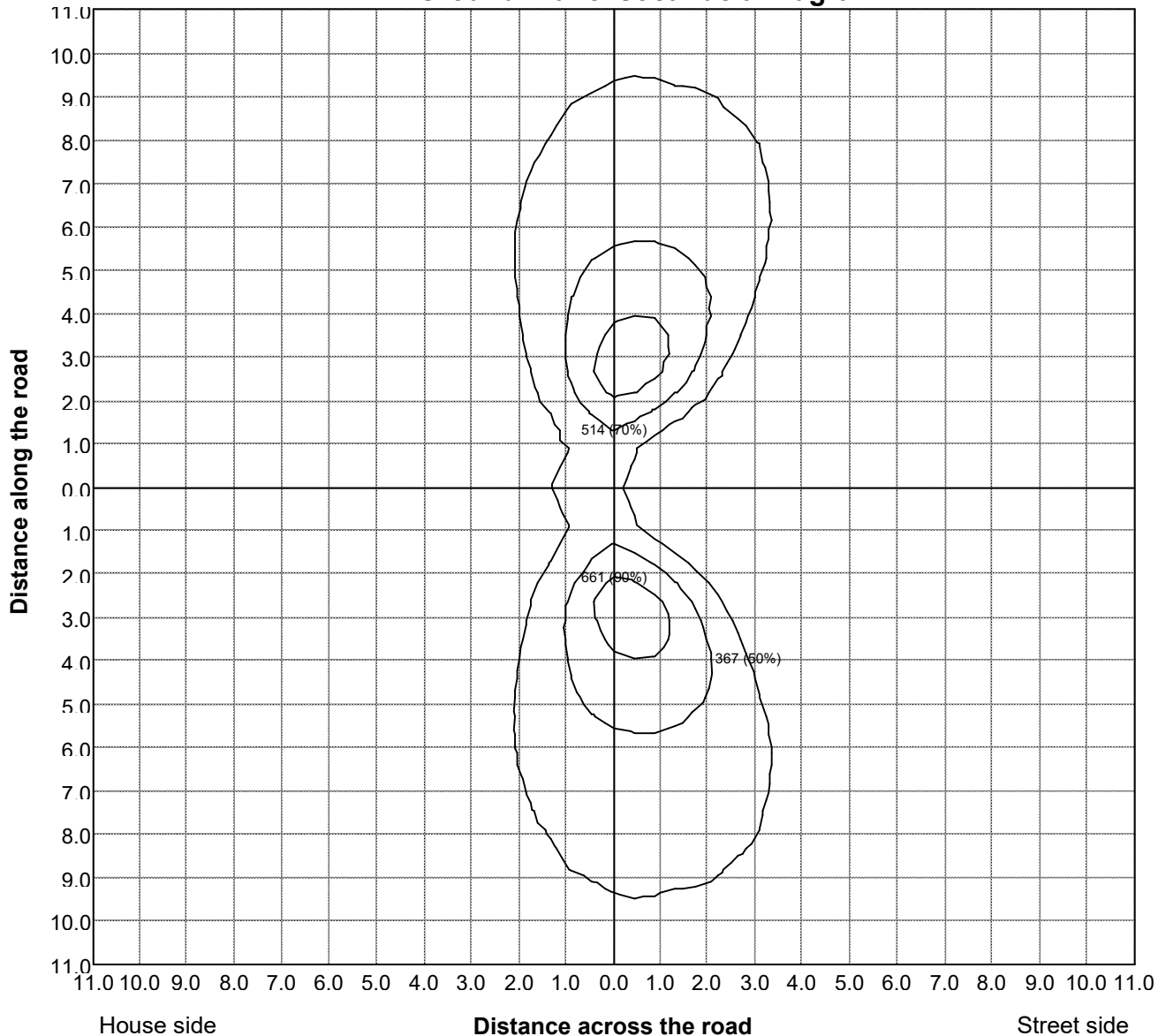
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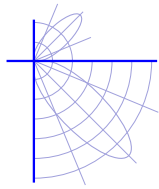
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### Ground Plane Isocandela Diagram



Note: The isocandela levels are based on a mounting height of H = 10.0 metres. Grid values show multiples of mounting height.  
 The isocandela contours are set to 10%, 20%, 30%, 50%, 70%, 90% of the maximum.  
 The isocandela contour units are expressed as candela. Upstream and downstream sides have been averaged.





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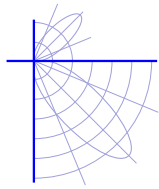
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**Kerb side luminous intensity data (cd)**

Gamma (°)	C-Plane								
	C270	C285	C300	C310	C315	C320	C325	C330	C335
0.0	399.9	399.9	399.9	399.9	399.9	399.9	399.9	399.9	399.9
10.0	404.4	404.9	406.1	406.6	408.2	407.6	409.4	408.8	407.8
20.0	402.3	405.9	410.9	414.0	416.4	416.0	418.1	417.1	416.5
30.0	395.6	401.8	406.9	410.8	410.2	408.5	412.2	414.1	414.2
35.0	392.8	398.2	399.3	401.2	401.1	401.1	406.9	409.9	411.0
40.0	389.4	392.7	390.6	391.0	391.5	393.0	399.4	404.4	407.6
45.0	382.9	382.9	378.8	379.6	381.3	383.8	392.6	401.7	411.6
47.5	378.2	376.7	372.8	374.2	376.7	379.9	389.9	401.8	413.2
50.0	373.1	370.4	367.0	369.3	372.2	375.9	388.2	402.1	416.2
52.5	367.0	363.5	360.4	364.1	367.3	372.1	387.0	402.4	419.9
55.0	359.7	356.4	353.6	359.2	362.2	368.9	385.5	402.8	421.0
57.5	350.9	348.2	346.7	353.6	357.1	365.5	384.0	403.8	425.6
60.0	341.1	340.0	339.9	346.9	352.0	362.3	382.5	406.6	433.4
62.5	328.7	330.4	332.7	340.4	346.6	358.6	381.3	410.3	443.4
65.0	315.4	319.0	322.7	332.5	340.8	354.7	380.1	415.7	455.3
67.5	301.6	306.7	312.0	323.5	333.4	348.1	377.9	418.0	462.5
70.0	285.7	290.1	296.9	310.3	321.2	338.7	369.9	411.9	457.6
72.5	264.3	269.1	279.5	293.4	305.4	324.3	355.1	393.1	434.5
75.0	239.2	242.9	257.2	272.4	284.7	302.3	332.4	364.0	405.6
77.5	213.7	214.7	231.2	246.6	257.3	277.5	304.1	334.8	374.0
80.0	182.3	186.7	200.0	217.1	227.8	247.2	275.0	302.7	340.1
82.5	152.8	157.4	170.8	185.2	199.0	217.8	243.2	270.2	303.3
85.0	123.7	127.3	140.3	153.7	165.8	182.2	205.8	236.2	265.3
87.5	94.2	96.5	108.2	121.0	131.3	146.2	169.6	195.2	223.6
90.0	70.6	69.5	78.6	88.8	96.9	110.5	132.2	159.6	183.5
92.5	47.4	44.1	49.0	55.7	68.3	80.6	99.5	122.9	145.8
95.0	31.1	24.9	26.6	30.0	40.4	52.7	70.9	93.0	112.5
97.5	15.4	10.8	10.9	13.0	20.2	31.3	47.9	65.1	81.8
100.0	6.3	6.2	7.4	8.9	11.1	18.0	30.5	45.0	59.1
102.5	5.1	5.3	5.3	6.3	8.0	12.3	22.6	34.4	45.2
105.0	3.7	3.3	3.1	4.5	5.8	9.2	17.5	26.8	34.9
120.0	0.0	0.0	0.0	0.0	0.1	0.3	1.2	2.2	3.2
135.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0







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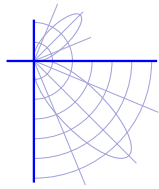
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Gamma (°)	Kerb side		Luminous intensity data (cd)						Road side	
	C340	C345	C350	C355	C-Plane		C10	C15	C20	
					C0	C5				
0.0	399.9	399.9	399.9	399.9	399.9	399.9	399.9	399.9	399.9	
10.0	408.6	409.1	408.2	408.0	407.3	406.3	405.7	404.6	403.2	
20.0	417.2	417.1	416.5	415.9	414.5	413.1	410.9	408.3	405.1	
30.0	417.2	419.6	421.4	422.5	421.9	419.6	415.4	408.8	401.8	
35.0	416.1	418.2	421.4	424.0	423.4	420.6	414.8	407.2	397.7	
40.0	413.3	419.4	425.8	430.5	430.9	427.7	420.7	409.5	396.2	
45.0	422.0	434.4	443.8	451.8	453.6	449.7	439.9	425.2	407.1	
47.5	428.1	443.1	456.5	467.3	469.4	465.0	454.6	437.2	417.1	
50.0	436.2	452.6	469.1	484.3	488.2	485.1	470.9	452.0	428.0	
52.5	439.8	461.8	485.0	505.6	512.0	506.6	492.8	470.6	445.2	
55.0	445.8	474.2	501.8	527.3	537.4	533.2	518.4	493.0	465.5	
57.5	454.5	487.6	525.0	553.6	565.8	561.5	544.5	520.2	489.8	
60.0	467.0	506.9	548.1	580.7	593.2	590.4	574.0	551.0	518.4	
62.5	484.8	530.0	577.2	615.1	628.3	626.1	608.7	584.8	551.3	
65.0	503.2	556.4	611.5	660.3	675.0	672.2	655.4	625.8	588.2	
67.5	515.8	582.3	645.7	694.1	715.3	717.4	703.1	677.7	631.8	
70.0	516.2	585.9	648.4	699.8	724.7	735.1	731.7	714.5	675.2	
72.5	493.0	560.0	622.0	676.0	707.3	723.7	726.2	717.4	683.8	
75.0	459.7	517.8	578.0	633.1	666.4	682.2	686.3	679.9	650.1	
77.5	421.5	471.6	523.3	570.3	595.4	606.7	613.8	611.1	583.5	
80.0	377.3	417.4	452.1	483.0	504.8	516.0	517.9	511.5	490.5	
82.5	331.5	357.2	379.5	401.5	416.2	418.6	417.8	410.3	399.7	
85.0	286.1	302.6	315.6	327.9	335.7	336.4	334.6	327.6	313.0	
87.5	240.9	253.3	260.7	262.8	268.2	262.7	260.0	251.5	241.3	
90.0	199.0	208.8	215.2	214.8	217.5	212.6	209.3	202.5	192.4	
92.5	161.4	167.0	171.6	172.3	173.3	169.4	165.1	157.3	149.1	
95.0	123.7	129.3	133.3	135.1	133.8	133.4	126.6	120.9	113.5	
97.5	90.7	96.3	99.7	101.0	99.6	98.2	95.2	87.7	81.1	
100.0	65.6	70.2	73.8	73.1	73.1	70.8	68.3	63.4	57.1	
102.5	49.6	53.7	55.5	55.5	55.2	53.7	51.0	46.9	42.6	
105.0	39.0	42.7	43.4	43.3	43.1	41.2	39.3	36.8	32.4	
120.0	3.8	4.5	4.8	4.7	4.4	4.2	4.0	3.6	3.2	
135.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
150.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
165.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
180.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	





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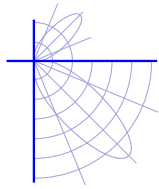
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**Road side luminous intensity data (cd)**

Gamma (°)	C-Plane								
	C25	C30	C35	C40	C45	C50	C60	C75	C90
0.0	399.9	399.9	399.9	399.9	399.9	399.9	399.9	399.9	399.9
10.0	402.0	400.4	398.5	396.3	394.7	393.4	390.4	385.0	383.0
20.0	401.7	397.9	393.7	389.9	387.7	382.0	372.7	359.5	350.7
30.0	393.9	385.6	377.2	370.1	362.8	356.3	345.1	326.8	316.1
35.0	387.6	376.8	364.5	353.9	344.6	338.4	326.8	308.1	299.5
40.0	381.3	365.0	349.4	335.9	325.3	319.3	307.6	289.5	283.3
45.0	386.9	364.4	342.4	323.5	309.2	300.4	288.8	271.7	269.1
47.5	393.7	369.1	345.5	323.8	305.6	293.5	279.0	263.0	262.2
50.0	403.2	376.5	350.0	325.6	303.3	288.2	269.6	255.3	255.5
52.5	416.4	389.0	357.4	329.0	302.8	284.3	261.5	248.5	249.2
55.0	434.4	401.8	368.4	335.5	305.0	282.3	255.2	243.8	243.5
57.5	457.5	420.9	382.7	345.0	309.6	282.6	249.6	239.5	237.9
60.0	483.8	441.8	399.9	357.8	316.3	284.3	245.8	238.0	232.6
62.5	513.3	467.9	420.2	371.8	322.8	286.6	242.5	233.8	225.4
65.0	546.7	495.7	441.9	386.3	331.1	289.0	239.9	228.9	218.8
67.5	579.9	523.4	463.6	398.7	336.6	290.8	238.1	224.9	216.7
70.0	611.3	545.5	479.0	405.2	337.7	289.0	237.6	219.3	214.1
72.5	625.4	551.1	476.1	398.2	328.9	283.4	235.1	212.6	205.4
75.0	605.0	527.4	447.3	371.7	305.4	265.9	227.4	207.9	192.1
77.5	547.1	482.8	399.4	327.1	270.9	237.5	210.3	193.9	175.0
80.0	460.0	409.3	334.5	270.7	225.4	202.3	183.3	169.5	152.3
82.5	373.6	336.3	276.4	222.2	186.4	164.6	153.0	140.7	125.6
85.0	290.6	261.5	220.3	175.5	147.0	132.1	123.1	113.1	101.4
87.5	226.7	204.1	174.9	135.1	110.7	96.8	93.3	86.4	74.8
90.0	180.3	160.7	134.6	97.4	78.7	66.6	62.9	61.7	51.8
92.5	138.5	119.8	99.5	66.9	47.9	40.4	38.7	42.4	34.3
95.0	102.3	86.7	69.9	40.9	25.6	22.1	21.4	27.1	19.6
97.5	71.6	60.4	46.0	26.4	13.3	11.3	12.5	14.6	11.2
100.0	50.3	41.8	32.8	19.1	8.6	7.6	8.2	7.9	7.8
102.5	37.8	31.2	24.5	15.0	6.6	5.8	6.7	6.6	7.3
105.0	28.1	22.9	17.8	11.3	5.0	4.4	5.3	5.6	6.4
120.0	2.6	1.8	1.1	0.6	0.2	0.0	0.1	0.3	0.6
135.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0





**Test Report No. LL24640**

Western Power. Product ID: 80 W Mercury Vapour Roadster Body with 80 W MV Lamp.

Cast aluminium body with white and raw finish and black plastic gear cover, overall extents ~ 465 x 275 x 125 mm deep. Clear bowl lens with prismatic ribbing forms luminous volume of 313 x 270 x 75 mm deep.

Specular hammertone reflectors about lamp. One Sylvania HSL-BW-80W lamp centred in L/V.

One Tridonic.Atco OMB80-03 250V 50Hz magnetic ballast.

Tested at 240 V 50 Hz. Spigot mount in C270 position.

<b>Environment</b>	Photometric distance	8.0 m
	Ambient temperature	25.0 °C

**Notes** Sampling was not performed. This report is applicable only to the sample that was tested.

The significance of the report is limited to the extent that the sample is representative of the population.

Testing was performed in a laboratory with suitable control of environmental conditions, stray light, electrical supply and stabilisation. The sample was maintained in a fixed orientation for the duration of testing.

The photometric values contained in this report are absolute, they have not been scaled by the luminous flux emitted by the light source .

Prorating values for the use of other light source/driver combinations, or for use in different environmental conditions, may yield erroneous results.

This report is free of erasures and corrections.

Photometric intensity values are reported using the CIE Cgamma coordinate system as described in CIE Publication number 121.

The term "Total luminaire power" may appear in this report, it represents the total electrical power consumption of the device tested.

**Procedure** LightLab Procedure Test-B3130. Tested in accordance with the applicable sections of CIE Publication Numbers 121 and 34; with reference to Australian Standard AS1680, Part 3.

**Measurement uncertainties** Measurement uncertainties are available on request.

