



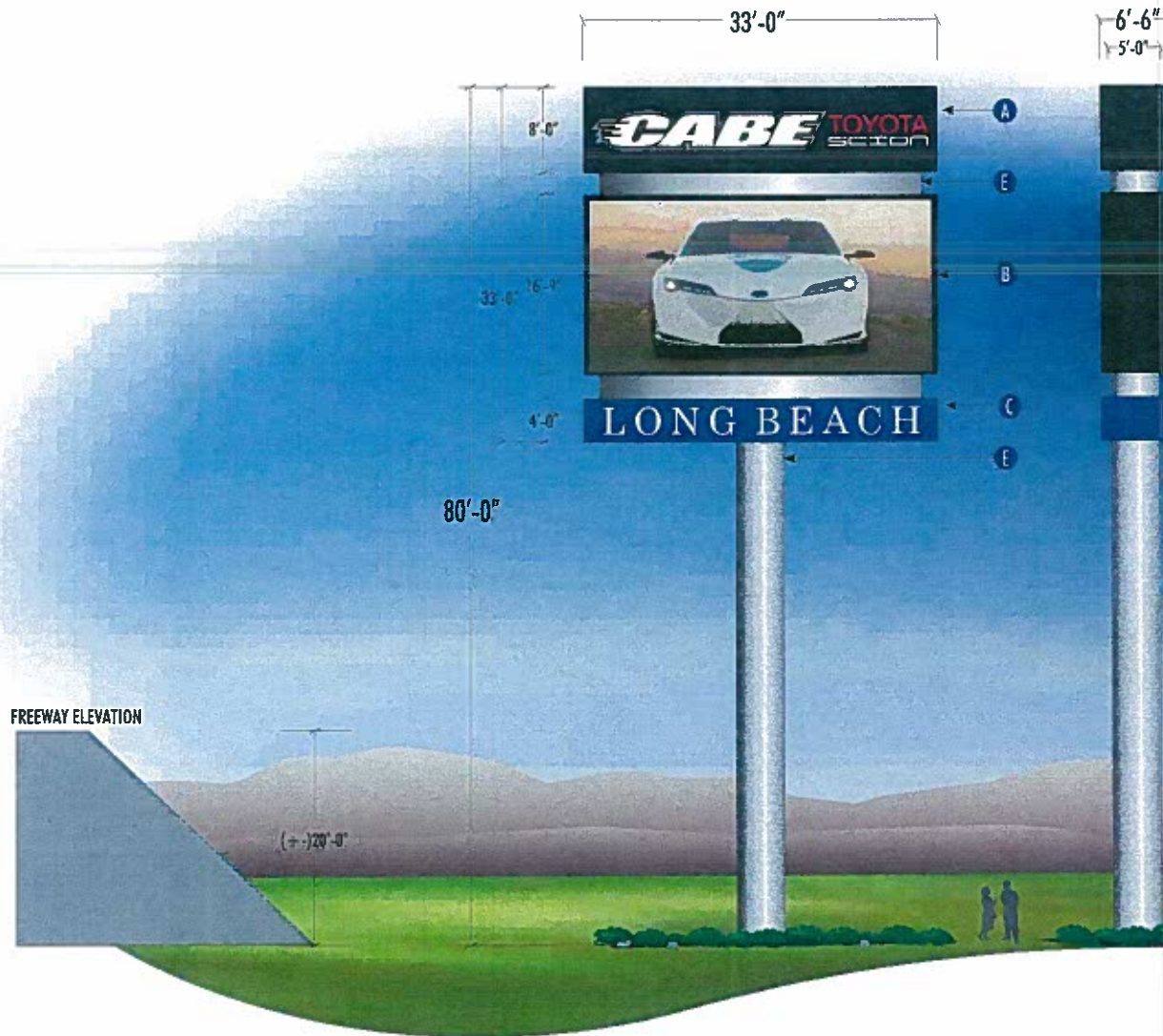
Looking south from Wardlow Road



Looking southwest from intersection



Looking west from Long Beach Blvd.



DISPLAY SPECIFICATIONS: DOUBLE FACE

- A** ILLUMINATED SIGN CABINET PAINTED BLACK, FACE SHALL BE 3M PANA-FLEX WITH VINYL COPY APPLIED
- B** OPTEC FULL COLOR L.E.D. DISPLAY 176 X 352 MATRIX, 28MM PITCH, MODEL #2848 RGB CABINET PAINTED BLACK
- C** ILLUMINATED SIGN CABINET PAINTED 2050 BLUE FACE SHALL BE 3M PANA-FLEX WITH 2050 BLUE OPAQUE BACKGROUND REVERSE CUT WHITE LETTERING
- E** REVEL + POLE TO BE PAINTED SILVER GRAY

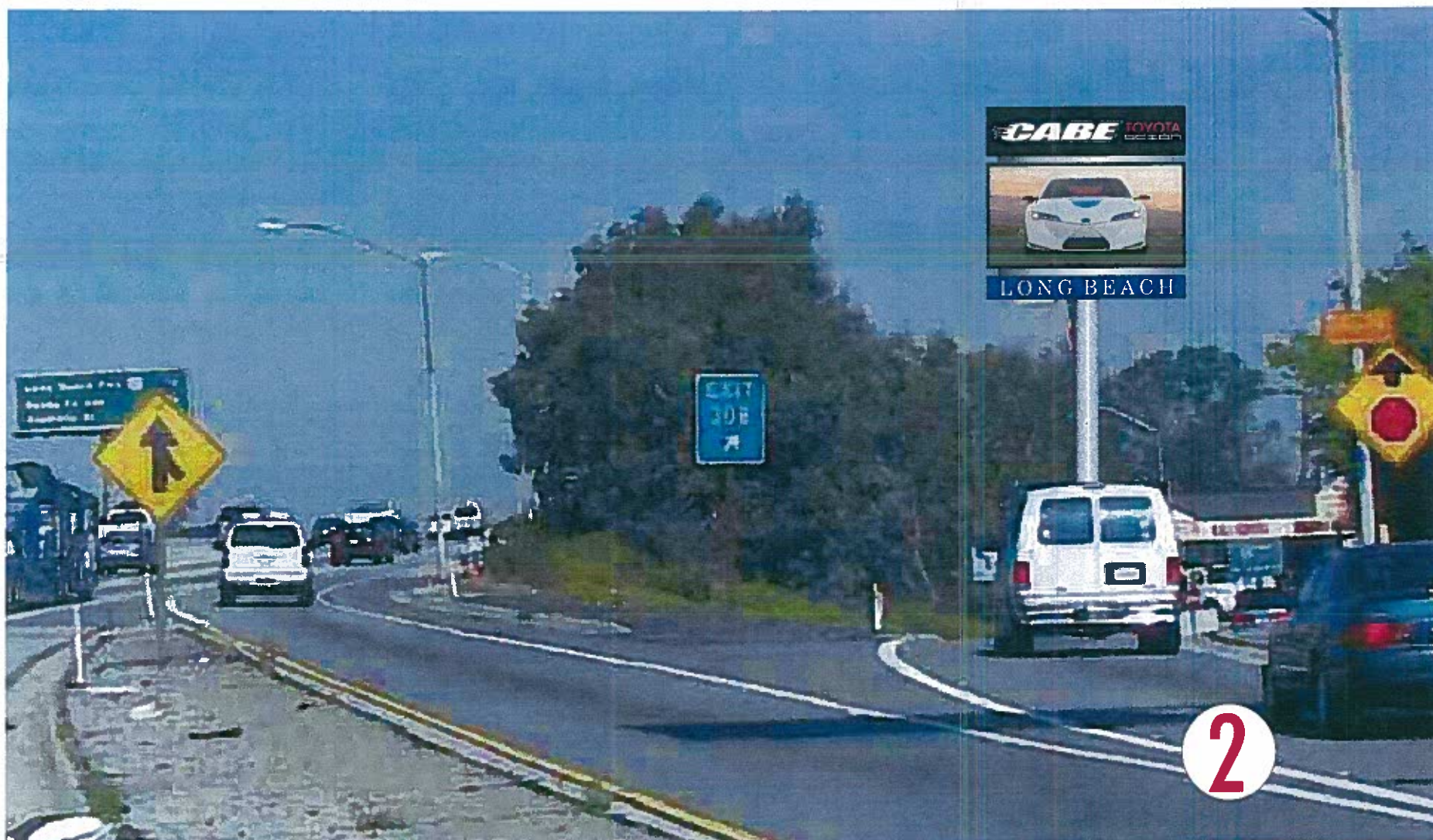
SMI SIGN METHODS INC. 1749 E. 28TH ST. SIGNAL HILL, CA 90755 909-455-4398 F. 562-477-6975	DATE	12/22/08	CUSTOMER/PROJECT/ADDRESS	LONG BEACH PYLON SIGN	CUSTOMER APPROVAL	PAGE	1	© 2009 Sign Methods, Inc. These drawings/concepts are the property of Sign Methods, Inc., Signal Hill, CA and shall not be used or duplicated, in all or part, without the expressed written consent of an authorized signatory of Sign Methods, Inc., enforceable by copyright law.
	DRAWING #	08-270	CABE TOYOTA		LANDLORD APPROVAL			
	DRAWN BY	RD	3377-4399 LONG BEACH BLVD.		REVISIONS	1	3/23/09 RD	
	SCALE	3/32" = 1'-0"	LONG BEACH CA, 90806		SALESPERSON	DC		


$$1/64^{\circ} = 1.0^{\circ}$$

 SIGN METHODS INC. 1747 E. 24TH ST. SIGNAL HILL, CA 92785 925-655-0334 F: 562-127-6975	DATE	12/22/08	CUSTOMER/PROJECT/ADDRESS	LONG BEACH PYLON SIGN	CUSTOMER APPROVAL			PAGE	2	© 2009 Sign Methods, Inc. These drawings/concepts are the property of Sign Methods, Inc., Signal Hill, CA and shall not be used or duplicated, in all or part, without the expressed written consent of an authorized signatory of Sign Methods, Inc., enforceable by copyright law.	
	DRAWING #	68-270		CABE TOYOTA	LANDLORD APPROVAL						
	DRAWN BY	RD		3377-4399 LONG BEACH BLVD.	REVISIONS	1	3/23/09 RD	2	3/31/09 RD		
	SCALE	NOTED		LONG BEACH CA, 90806	SALESPERSON	DC					



SCALE: 3/32" = 1'-0"



PROPOSED PYLON ELEVATION(405 FWY NORTH EXIT LONG BEACH BLVD)

1/16" = 1'-0"

 SIGN METHODS INC. 1749 E. 28TH ST. SIGNAL HILL, CA 90755 800-455-1224 T: 562-472-1275	DATE	12/22/08	CUSTOMER/PROJECT/ADDRESS	LONG BEACH PYLON SIGN	CUSTOMER APPROVAL		PAGE	3	© 2009 Sign Methods, Inc. These drawings/concepts are the property of Sign Methods, Inc., Signal Hill, CA and shall not be used or duplicated, in all or part, without the expressed written consent of an authorized signatory of Sign Methods, Inc., enforceable by copyright law.
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	SCALE	NOTED		LONG BEACH CA, 90806	SALESPERSON	DC			


$$1/32'' = 1'-0''$$

Cabe Toyota Annual Sales Tax Revenue History

	Taxable Revenue	Taxes paid to City
2008	\$ 34,174,117	\$ 341,741
2007	\$ 48,921,633	\$ 489,216
2006	\$ 44,515,151	\$ 445,152
2005	\$ 40,003,543	\$ 400,035
2004	\$ 39,207,344	\$ 392,073
Total		\$ 2,068,218



- Recent Toyota study shows 1 million local car owners travel 405 freeway each month.
- Facility improvements & Freeway sign should improve location visibility and lead to a significant increase in revenue.

As compared to competition with Freeway locations.

– CERRITOS TOYOTA 5816 units - CARSON TOYOTA 3416 units
GARDEN GROVE TOYOTA 2120 units

- New car forecast for 2010 = 1225 vs. 825 in 2008
- Allow Cabe to remain in Long Beach and complete expansion plans.

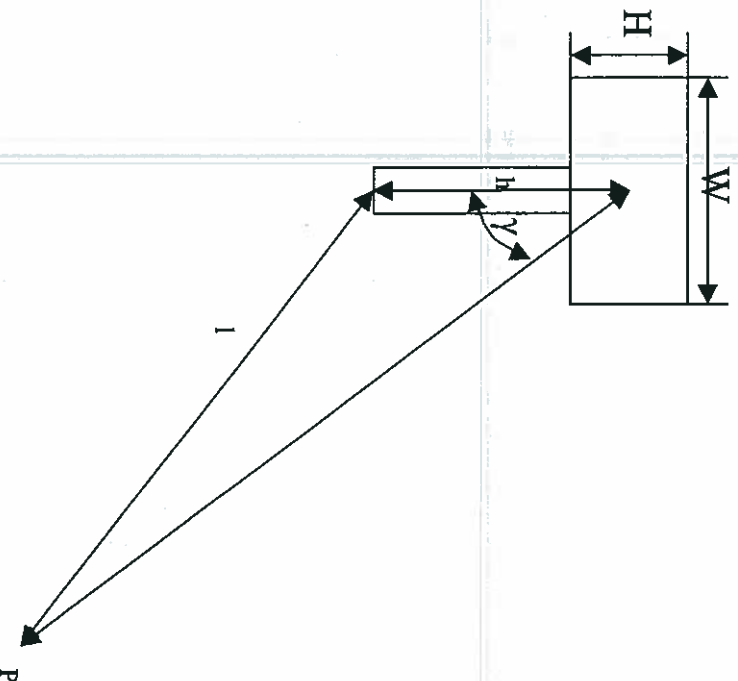
2010 Revenue Projection

* Assumes facility upgrade and Freeway Sign

Taxable Revenue	\$ 54,000,000
Projected sales unit growth	400 units
	33 per month
Projected Taxable Rev growth	\$ 20,000,000
New Annual City Tax Revenue projection	\$ 200,000
Projected Annual City Tax Revenue	\$ 540,000

LED sign light pollution calculation

For easy calculate the LED sign light pollution we use street lamp illuminance formula calculate.



$$E_p = \frac{I_{rc}}{h^2} \cos^3 \gamma$$

E_p is the illuminance at point P (lx)

I_{rc} is the LED sign luminance intensity at point P (cd)

h is the LED sign center high (m)

l is the distance from LED sign (m)

Example distance = 100'.

Brightness 8,000 nits

$h = 30' \approx 9.15 \text{ m}$

$$l = 100' \approx 30.49 \text{ m}$$

$$H = 16' 2'' \approx 5 \text{ m}$$

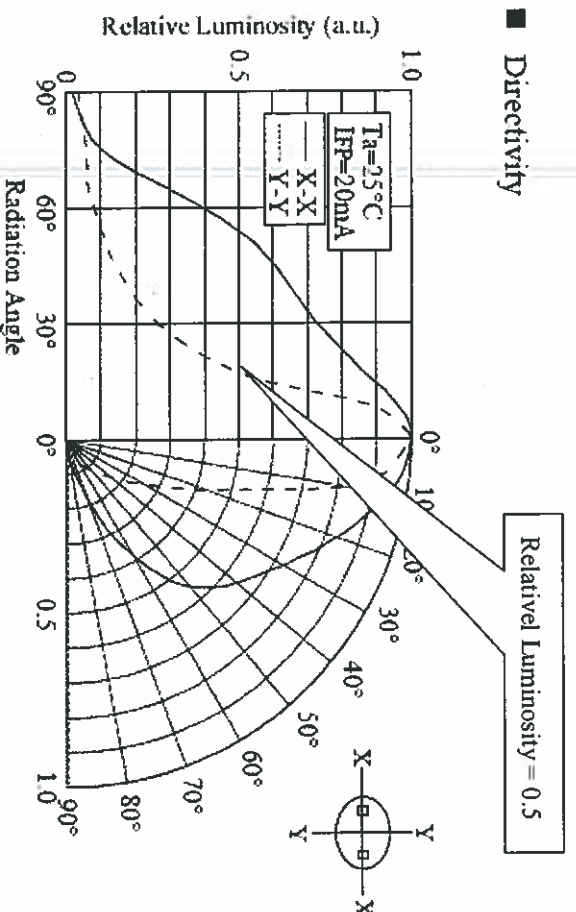
$$W = 32' 4'' \approx 10 \text{ m}$$

$$\gamma = \arctan \frac{l}{h} \approx 73.3^\circ$$

$$90^\circ - 73.3^\circ = 16.7^\circ$$

According to follow chart at 16.7° directivity relative luminosity

$$= 0.5$$



According to LED sign luminance is 8,000 nits and size is 5m

high 10m width, we have total luminance intensity I_{total} .

$$I_{\text{total}} = 8,000 \times 5 \times 10 = 400,000 \text{ (cd)}$$

$$I_{\text{rc}} = I_{\text{total}} \times 0.5 = 400,000 \times 0.5 = 200,000 \text{ (cd)}$$

$$E_p = \frac{I_{rc}}{h^2} \cos^3 \gamma$$

$$E_p = 200,000 \div h^2 \times \cos^3 \gamma = 56.7 \text{ lx}$$

Example distance = 500'.

Brightness 8,000 nits

$$h = 30' \approx 9.15 \text{ m}$$

$$l = 500' \approx 152.4 \text{ m}$$

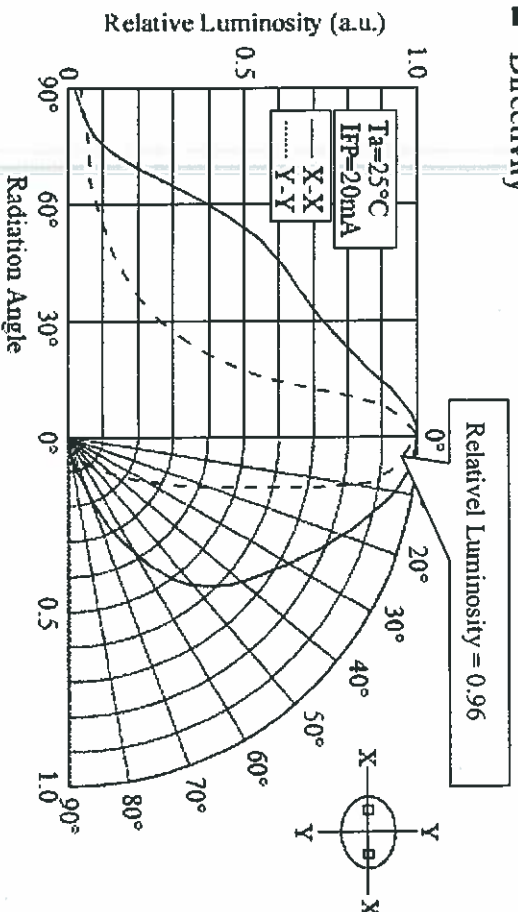
$$H = 16' 2'' \approx 5 \text{ m}$$

$$W = 32' 4'' \approx 10 \text{ m}$$

$$\gamma = \arctan \frac{l}{h} \approx 86.6^\circ$$

$$90^\circ - 86.6^\circ = 3.4^\circ$$

■ Directivity



$$I_{rc} = I_{\text{total}} \times 0.96 = 400,000 \times 0.96 = 384,000 \text{ (cd)}$$

$$E_p = \frac{I_{rc}}{h^2} \cos^3 \gamma$$

$$E_p = 384,000 \div h^2 \times \cos^3 \gamma = 0.99 \text{ lx}$$

Example distance = 1,000'.

Brightness 8,000 nits

$$h = 30' \approx 9.15 \text{ m}$$

$$l = 1000' \approx 304.9 \text{ m}$$

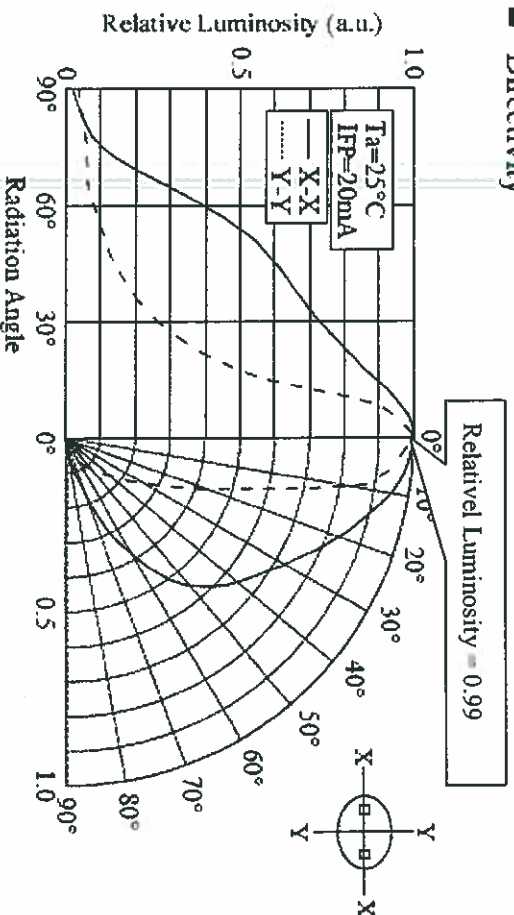
$$H = 16' 2'' \approx 5 \text{ m}$$

$$W = 32' 4'' \approx 10 \text{ m}$$

$$\gamma = \arctan \frac{l}{h} \approx 88.3^\circ$$

$$90^\circ - 88.6^\circ = 1.7^\circ$$

■ Directivity



$$I_{rc} = I_{\text{total}} \times 0.99 = 400,000 \times 0.99 = 396,000 \text{ (cd)}$$

$$E_p = \frac{I_{rc}}{h^2} \cos^3 \gamma$$

$$E_p = 396,000 \div h^2 \times \cos^3 \gamma = 0.13 \text{ lx}$$

Results of the calculation at 100% brightness:

Distance	100'	500'	1,000'
Illuminance	56.7 lx	0.99 lx	0.13 lx

Projected Results of the calculation at Actual brightness (<50%):

Distance	100'	500'	1,000'
Illuminance	15.7 lx	0.12 lx	0.001 lx

Illuminance	Example
0.002 lux	Moonless clear night sky with <u>airglow</u> ^[2]
0.01 lux	<u>Quarter moon</u>
0.2 lux	Design minimum for emergency lighting (AS2293).
0.27 lux	Full moon on a clear night ^{[2][3]}
1 lux	Full moon overhead at tropical latitudes ^[4]
3.4 lux	Dark limit of civil <u>twilight</u> under a clear sky ^[5]
50 lux	Family living room ^[6]
80 lux	Hallway/toilet ^[7]
100 lux	Very dark overcast day ^[2]