



Réponses aux questions 33 et 38 (DQ19)

Question 33

Dans l'étude d'impact du projet du nouveau poste Bélanger à 315-120-25 kV, il est mentionné que le bâtiment à deux niveaux aurait une hauteur de 24 mètres. Serait-il possible de confirmer cette information et de la comparer avec la hauteur des tours Novello et des résidences environnantes?

De plus, la commission aimerait obtenir des coupes transversales du projet, dont une nord-sud afin d'illustrer la hauteur du bâtiment proposé le plus élevé du poste par rapport aux tours Novello et au Centre jeunesse de Montréal, ainsi qu'une est-ouest illustrant le même bâtiment par rapport aux habitations environnantes.

Réponse d'Hydro-Québec

La hauteur du bâtiment à deux niveaux est de 24,9 mètres.

Les 2 coupes longitudinales ci-jointes, montrent les hauteurs relatives des bâtiments (les vues en élévation sont à l'échelle 1:1000 sur format 11X17).

Question 38

L'éclairage des postes répondrait au principe de ciel noir selon le promoteur (DT1, p. 129). Pourriez-vous préciser les différents types d'abat-jour qui seraient utilisés sur les luminaires des postes projetées? Veuillez également présenter leur efficacité photométrique, à savoir la proportion de lumière orientée vers le sol par rapport à celle orientée vers le ciel.

Réponse d'Hydro-Québec

Voici la proportion de la lumière orientée vers le sol, par rapport à celle orientée vers le ciel en fonction de leur emplacement.

Les courbes photométriques permettent de caractériser les systèmes optiques des luminaires concernant la répartition de l'éclairage vers le haut et vers le bas (voir les fichiers pdf joints).

Lors de l'installation, l'angle d'inclinaison peut faire varier les pourcentages ci-dessous.

Description	Spécification	Pourcentage de répartition
Luminaire sur charpente et pour batterie de condensateur, 150W ou 250W SHP, H.M. 2.15	Holophane Substation série SU	(Haut 100% / BAS 0%)
Luminaire mural pour zones des transformateurs	Canlyte Keene Pentaflood série PF2	(Haut 75% / BAS 25%)
L'éclairage de la clôture et de la barrière, 150W SHP, H.M. 4.7	Gardco Lighting série G18	(Haut 0% / BAS 100%)
Luminaire 1000W SHP sur couronne mobile de tour d'éclairage de 17m	GE Powerflood série PF1K / IGLA-PF1K	(Haut 25% / BAS 75%)
Luminaire architectural mural, 150W SHP, H.M. inférieure à 3 m.	Canlyte Keene FloodPak série FP	(Haut 0% / BAS 100%)

H.M. : Hauteur de montage

SHP : Lampe au sodium haute pression



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Photometric Report (Type C)

Filename: SU2A250HP00TL - 250W HPS CLEAR.ies

[TEST] 500031

[TESTLAB] HOLOPHANE TESTING LABS

[ISSUEDATE] 10/9/2008

[MANUFAC] Holophane

[LUMCAT] SU2A250HP00TL

[LUMINAIRE] SUBSTATION

[LAMPCAT] LU250 ET-18

[LAMP] 250W HPS CLEAR VBD MOGUL

[BALLAST] 250W HPS

Maximum Candela = 6127 at 0 H 110 V

Classification:

Road Classification: Type V, Very Long, Non-Cutoff (deprecated)

Upward Wast Light Ratio: 0.87

Luminaire Efficacy Rating (LER): 81

Indoor Classification: Semi-Indirect

BUG Rating : B2-U5-G3

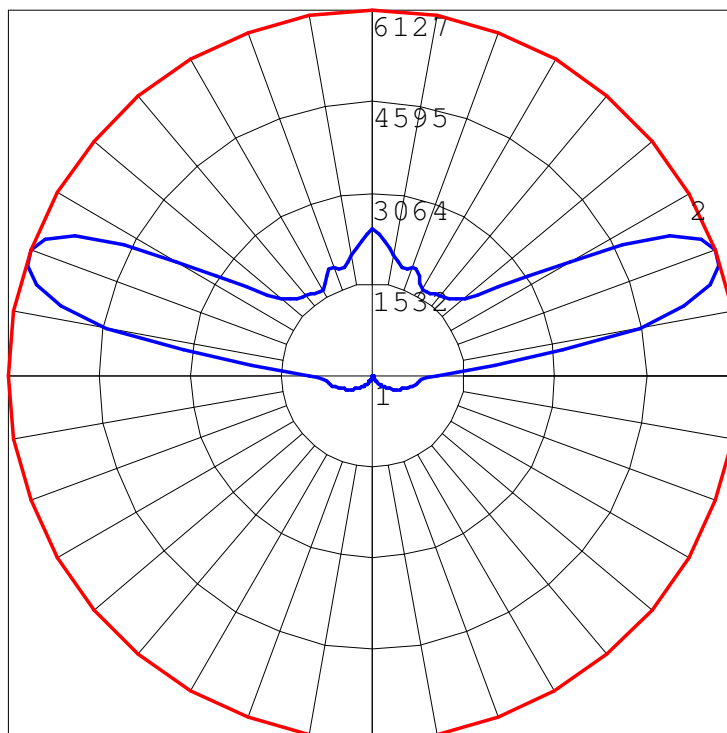
Polar Candela Curves:

Vertical Plane Through:

1) 0 - 180 Horizontal

Horizontal Cone Through:

2) 110 Vertical





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Photometric Report (Type C)

Filename: SU2A250HP00TL - 250W HPS CLEAR.ies

[TEST] 500031
[TESTLAB] HOLOPHANE TESTING LABS
[ISSUE DATE] 10/9/2008
[MANUFAC] Holophane
[LUMCAT] SU2A250HP00TL
[LUMINAIRE] SUBSTATION
[LAMPCAT] LU250 ET-18
[LAMP] 250W HPS CLEAR VBD MOGUL
[BALLAST] 250W HPS

Maximum Candela = 6127 at 0 H 110 V

Classification:

Road Classification: Type V, Very Long, Non-Cutoff (deprecated)

Upward Waste Light Ratio: 0.87

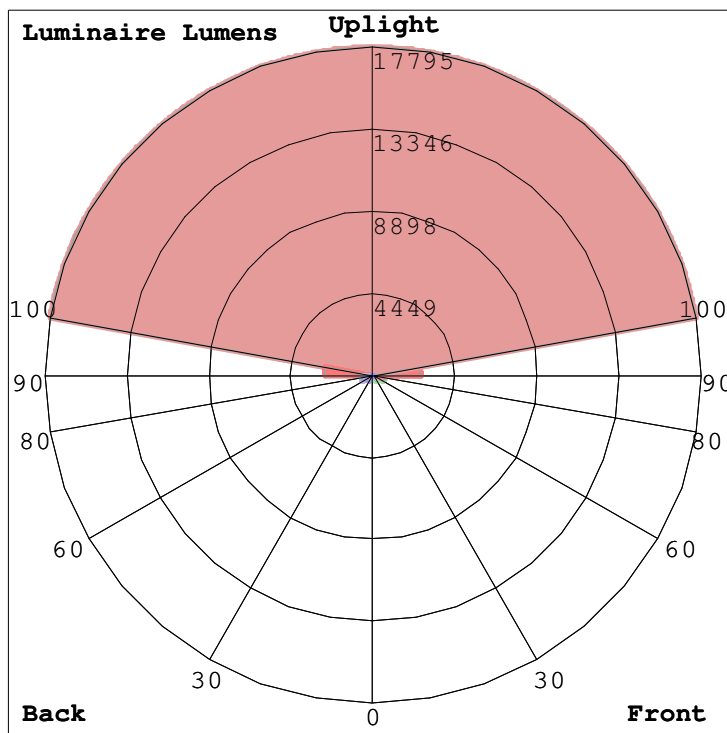
Luminaire Efficacy Rating (LER): 81

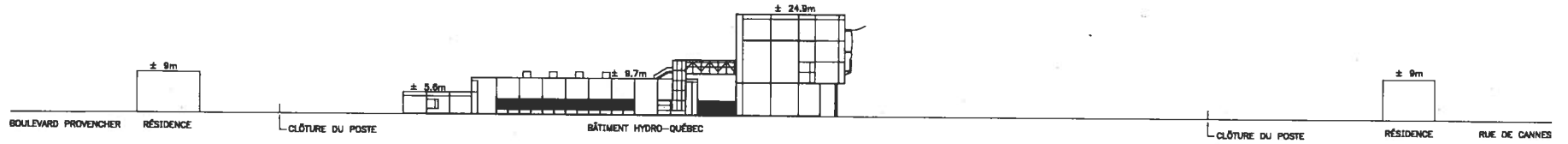
Indoor Classification: Semi-Indirect

BUG Rating : B2-U5-G3

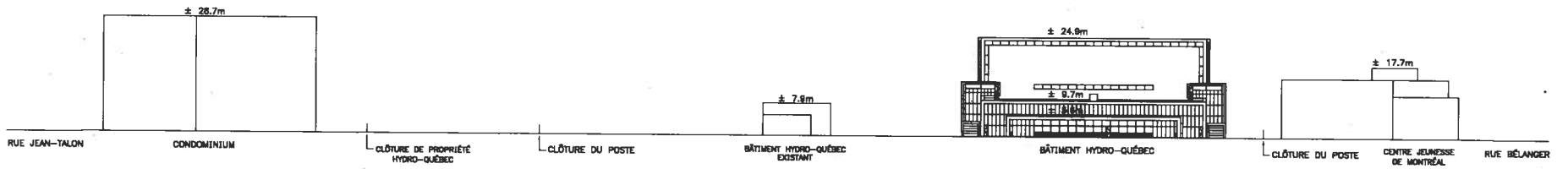
LCS Summary:

LCS Zone	Lumens	%Lamp	%Lum
FL (0-30)	20.8	0.1	0.1
FM (30-60)	348.3	1.2	1.5
FH (60-80)	632.7	2.2	2.7
FVH (80-90)	467.6	1.6	2.0
BL (0-30)	20.8	0.1	0.1
BM (30-60)	348.3	1.2	1.5
BH (60-80)	632.7	2.2	2.7
BVH (80-90)	467.6	1.6	2.0
UL (90-100)	2585.1	8.9	11.1
UH (100-180)	17795.2	61.4	76.3
Total	23319.1	80.5	100.0
BUG Rating	B2-U5-G3		





COUPE EST/OUEST
ÉCHELLE 1:1000



COUPE NORD / SUD
ÉCHELLE 1:1000

POSTE BÉLANGER



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Photometric Report (Type C)

Filename: fps150s00.ies

[TEST] fp1150m00-IES

[ISSUEDATE] 7-16-03

[MANUFAC] STONCO

[LUMCAT] Floodpack Size1 - 0 Degree

[LUMINAIRE] Photopia File - sz1-rfl1-150hps

[LAMP] 150 watt High Pressure Sodium - Clear B-17

Maximum Candela = 4719 at 80 H 15 V

Classification:

Road Classification: Type I, Very Short, Cutoff (deprecated)

Luminaire Efficacy Rating (LER): 56

Indoor Classification: Direct

BUG Rating : B1-U5-G3

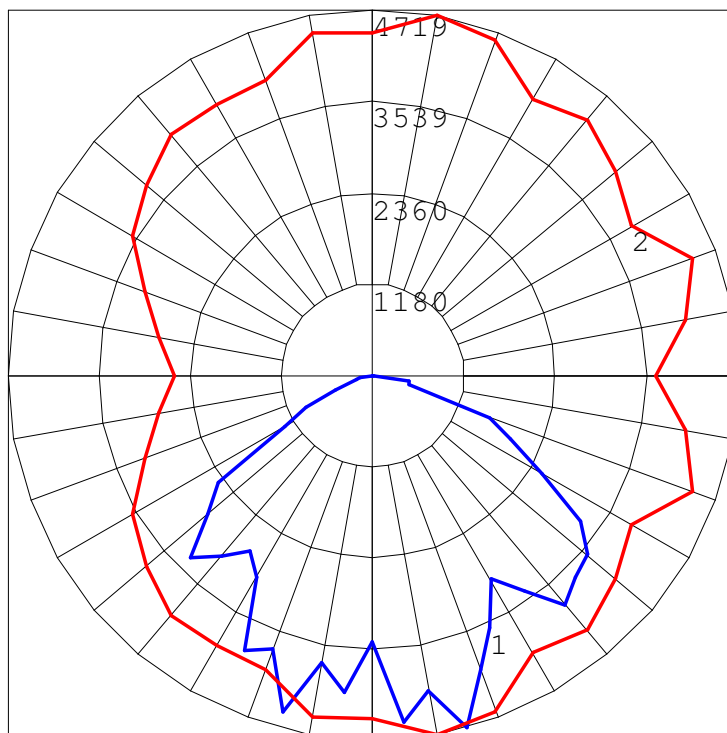
Polar Candela Curves:

Vertical Plane Through:

1) 80 - 260 Horizontal

Horizontal Cone Through:

2) 15 Vertical





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Photometric Report (Type C)

Filename: G18-3XL-150H.ies

[TEST] 97-6116

[ISSUEDATE] 1/30/1997

[MANUFAC] PHILIPS GARDCO

[LUMCAT] G18-3XL-150HPS

[LUMINAIRE] GULLWING

[LAMP] CLEAR HORIZONTAL 150HPS RATED FOR 16000 LUMENS

Maximum Candela = 8800 at 55 H 67.5 V

Classification:

Road Classification: Type III, Short, Full Cutoff (deprecated)

Upward Wast Light Ratio: 0.00

Luminaire Efficacy Rating (LER): 69

Indoor Classification: Direct

BUG Rating : B3-U0-G3

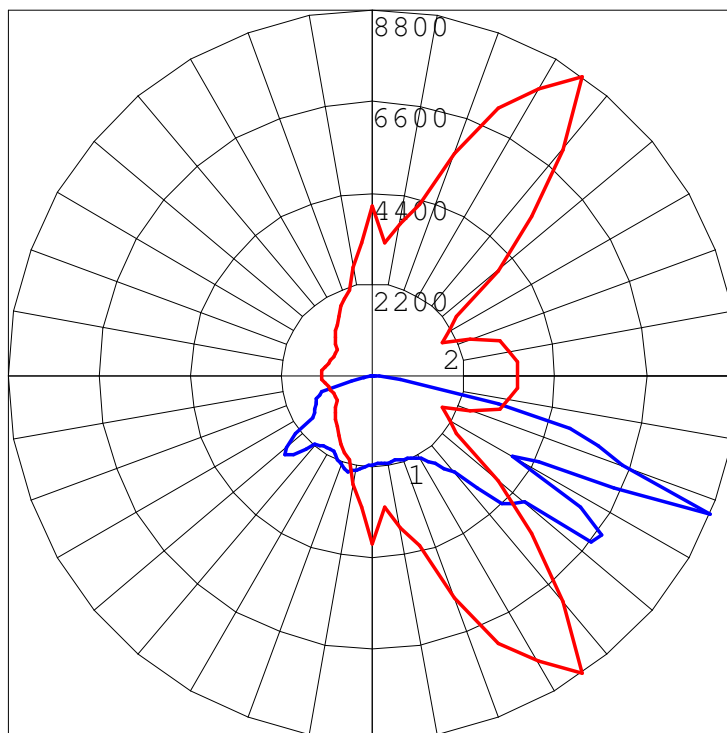
Polar Candela Curves:

Vertical Plane Through:

1) 55 - 235 Horizontal

Horizontal Cone Through:

2) 67.5 Vertical





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Photometric Report (Type C)

Filename: G18-3XL-150H.ies

[TEST] 97-6116

[ISSUEDATE] 1/30/1997

[MANUFAC] PHILIPS GARDCO

[LUMCAT] G18-3XL-150HPS

[LUMINAIRE] GULLWING

[LAMP] CLEAR HORIZONTAL 150HPS RATED FOR 16000 LUMENS

Maximum Candela = 8800 at 55 H 67.5 V

Classification:

Road Classification: Type III, Short, Full Cutoff (deprecated)

Upward Waste Light Ratio: 0.00

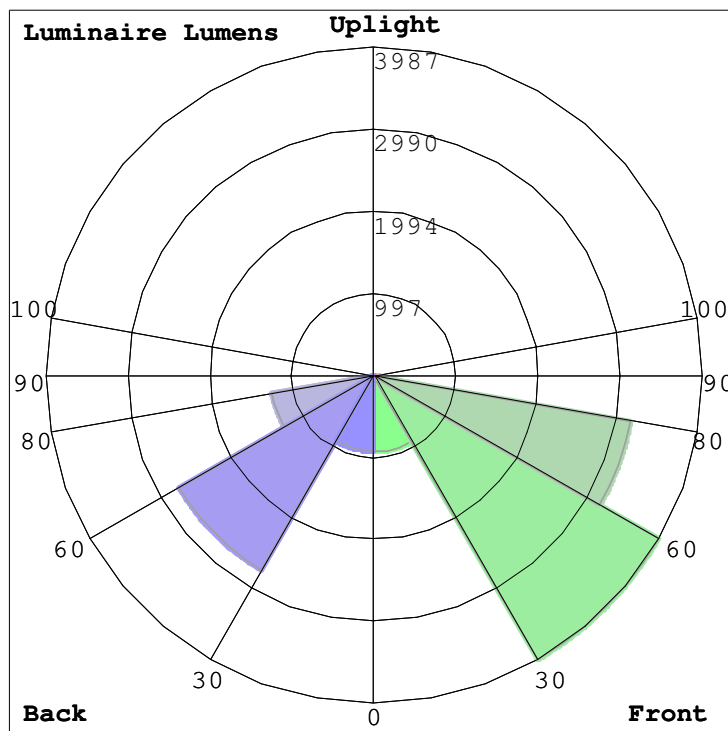
Luminaire Efficacy Rating (LER): 69

Indoor Classification: Direct

BUG Rating : B3-U0-G3

LCS Summary:

LCS Zone	Lumens	%Lamp	%Lum
FL (0-30)	927.1	5.8	7.1
FM (30-60)	3987.2	24.9	30.5
FH (60-80)	3170.7	19.8	24.3
FVH (80-90)	49.5	0.3	0.4
BL (0-30)	921.6	5.8	7.1
BM (30-60)	2730.5	17.1	20.9
BH (60-80)	1252.8	7.8	9.6
BVH (80-90)	24.9	0.2	0.2
UL (90-100)	0.0	0.0	0.0
UH (100-180)	0.0	0.0	0.0
Total	13064.3	81.7	100.0
BUG Rating	B3-U0-G3		



Photometric Report (Type B)

Filename: GE177799.IES
[TEST] 95050505 PUBLISHED CURVE CREATED
[MANUFAC] GE C&I, LIGHTING SYSTEMS - EAST FLAT ROCK,
NC, USA
[LUMCAT] PF1K01S***6X5**
[LUMINAIRE] PF-1000 POWERFLOOD
[LAMPCAT] GE LU1000
[LAMP] 1; 1000W HPS, CLEAR E25, HORZ

Maximum Candela = 136080 at 0 H 0 V



Classification:

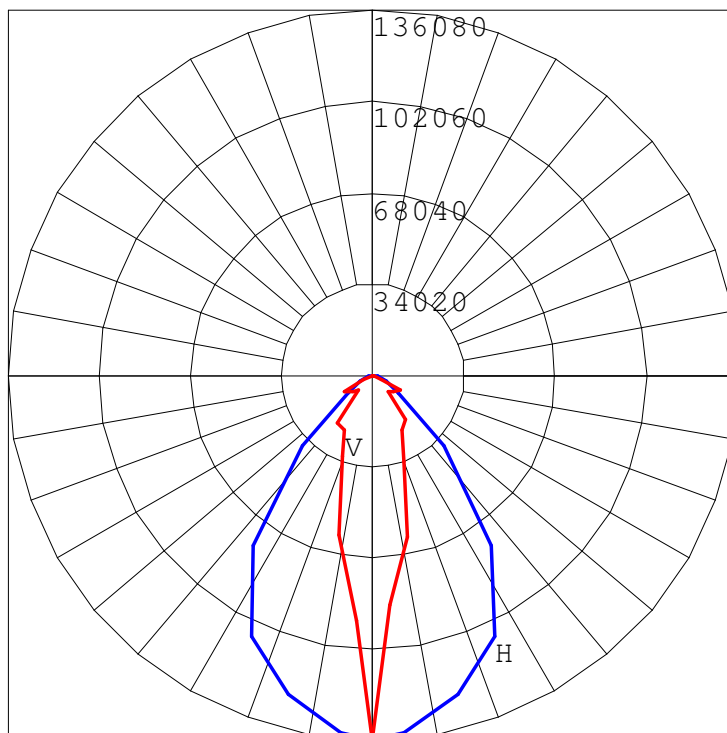
Luminaire Efficacy Rating (LER): 86
Flood NEMA Type: 6H x 5 V

Axial Candela Display:

Polar Graph

Horizontal Axis (H)

Vertical Axis (V)





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Photometric Report (Type C)

Filename: PF2150NWS.ies

[TEST] LSCB572

[TESTLAB] Lighting Sciences Canada Ltd. 440 Phillip
St., Unit 19 Waterloo, Ontario

[ISSUEDATE] 02-14-2007

[MANUFAC] CANLYTE INC. CAMBRIDGE, ONTARIO

[LUMCAT] PF2A150NWLXL-T

[LUMINAIRE] CANLYTE SIZE 2 PENTAFLOOD LUMINAIRE WIDE
SPECULAR MAIN, DIFFUSE TOP/BOTTOM REFLECTOR & CLEAR
FLAT GLASS LENS

[LAMP] ONE 150W CLEAR ED-17 HIGH PRESSURE SODIUM LAMP.

LUMEN RATING = 16000 LMS.

Maximum Candela = 5251 at 110 H 35 V

Classification:

Road Classification: Type I, Very Short, Full Cutoff (deprecated)

Upward Wast Light Ratio: 0.00

Luminaire Efficacy Rating (LER): 51

Indoor Classification: Direct

BUG Rating : B3-U0-G2

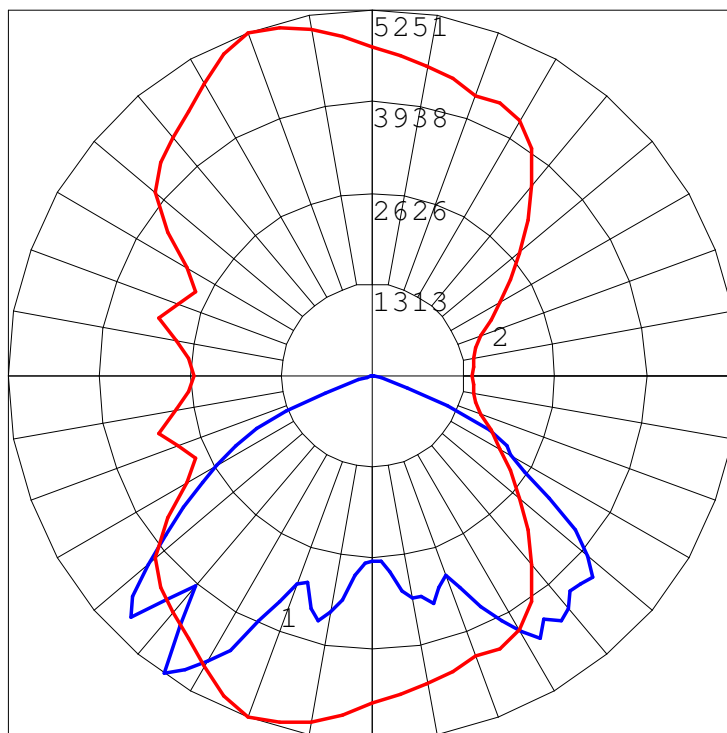
Polar Candela Curves:

Vertical Plane Through:

1) 110 - 290 Horizontal

Horizontal Cone Through:

2) 35 Vertical





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Photometric Report (Type C)

Filename: PF2150NWS.ies

[TEST] LSCB572

[TESTLAB] Lighting Sciences Canada Ltd. 440 Phillip
St., Unit 19 Waterloo, Ontario

[ISSUE DATE] 02-14-2007

[MANUFAC] CANLYTE INC. CAMBRIDGE, ONTARIO

[LUMCAT] PF2A150NWLXL-T

[LUMINAIRE] CANLYTE SIZE 2 PENTAFLOOD LUMINAIRE WIDE
SPECULAR MAIN, DIFFUSE TOP/BOTTOM REFLECTOR & CLEAR
FLAT GLASS LENS

[LAMP] ONE 150W CLEAR ED-17 HIGH PRESSURE SODIUM LAMP.

LUMEN RATING = 16000 LMS.

Maximum Candela = 5251 at 110 H 35 V

Classification:

Road Classification: Type I, Very Short, Full Cutoff (deprecated)

Upward Waste Light Ratio: 0.00

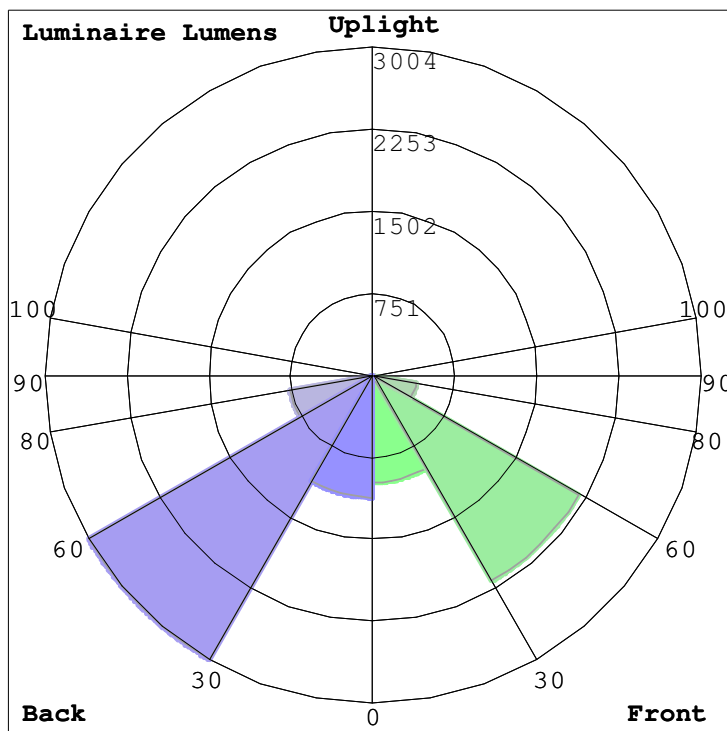
Luminaire Efficacy Rating (LER): 51

Indoor Classification: Direct

BUG Rating : B3-U0-G2

LCS Summary:

LCS Zone	Lumens	%Lamp	%Lum
FL (0-30)	982.8	7.9	11.6
FM (30-60)	2178.1	17.4	25.7
FH (60-80)	403.7	3.2	4.8
FVH (80-90)	0.1	0.0	0.0
BL (0-30)	1119.8	9.0	13.2
BM (30-60)	3004.1	24.0	35.5
BH (60-80)	770.9	6.2	9.1
BVH (80-90)	1.5	0.0	0.0
UL (90-100)	0.0	0.0	0.0
UH (100-180)	0.0	0.0	0.0
Total	8461.0	67.7	100.0
BUG Rating	B3-U0-G2		





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Photometric Report (Type C)

Filename: SU1A15AHP00TL - 150W HPS CLEAR.ies

[TEST] 500036

[TESTLAB] HOLOPHANE TESTING LABS

[ISSUE DATE] 10/9/2008

[MANUFAC] Holophane

[LUMCAT] SU1A15AHP00TL

[LUMINAIRE] SUBSTATION

[LAMPCAT] LU150/55 ET-23.5

[LAMP] 150W HPS CLEAR VBD MOGUL

[BALLAST] 150W HPS MULTI CWA

Maximum Candela = 4298 at 0 H 110 V

Classification:

Road Classification: Type V, Very Long, Non-Cutoff (deprecated)

Upward Wast Light Ratio: 0.88

Luminaire Efficacy Rating (LER): 69

Indoor Classification: Semi-Indirect

BUG Rating : B1-U5-G3

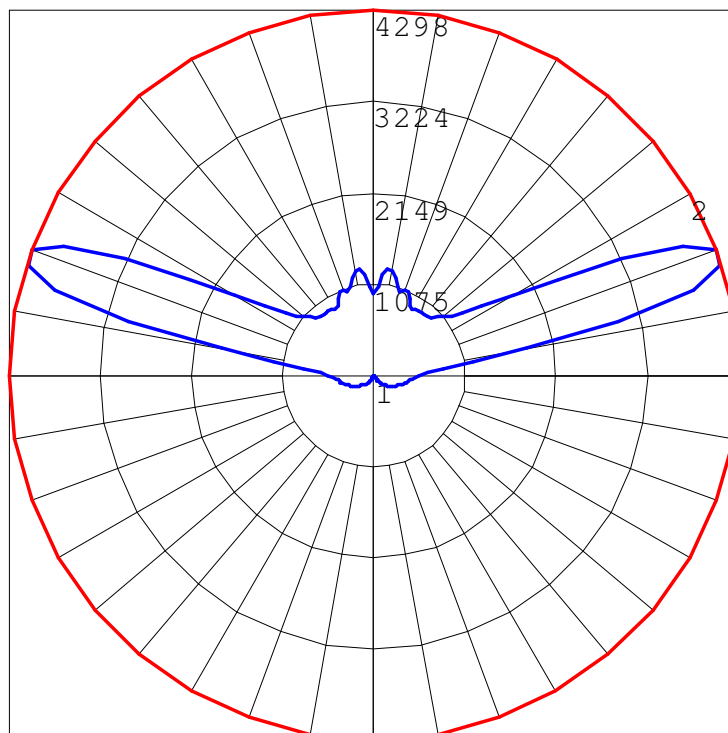
Polar Candela Curves:

Vertical Plane Through:

1) 0 - 180 Horizontal

Horizontal Cone Through:

2) 110 Vertical





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Photometric Report (Type C)

Filename: SU1A15AHP00TL - 150W HPS CLEAR.ies

[TEST] 500036

[TESTLAB] HOLOPHANE TESTING LABS

[ISSUEDATE] 10/9/2008

[MANUFAC] Holophane

[LUMCAT] SU1A15AHP00TL

[LUMINAIRE] SUBSTATION

[LAMPCAT] LU150/55 ET-23.5

[LAMP] 150W HPS CLEAR VBD MOGUL

[BALLAST] 150W HPS MULTI CWA

Maximum Candela = 4298 at 0 H 110 V

Classification:

Road Classification: Type V, Very Long, Non-Cutoff (deprecated)

Upward Waste Light Ratio: 0.88

Luminaire Efficacy Rating (LER): 69

Indoor Classification: Semi-Indirect

BUG Rating : B1-U5-G3

LCS Summary:

LCS Zone	Lumens	%Lamp	%Lum
FL (0-30)	11.1	0.1	0.1
FM (30-60)	190.8	1.2	1.5
FH (60-80)	347.7	2.2	2.7
FVH (80-90)	247.8	1.5	1.9
BL (0-30)	11.1	0.1	0.1
BM (30-60)	190.8	1.2	1.5
BH (60-80)	347.7	2.2	2.7
BVH (80-90)	247.8	1.5	1.9
UL (90-100)	1044.8	6.5	8.0
UH (100-180)	10371.5	64.8	79.7
Total	13011.1	81.3	100.0
BUG Rating	B1-U5-G3		

