HAVIT COMMERCIAL
http://www.havitcommercial.com.au
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Report No.: 001 Test Time: 2019-10-15 09:55

Luminaire Property

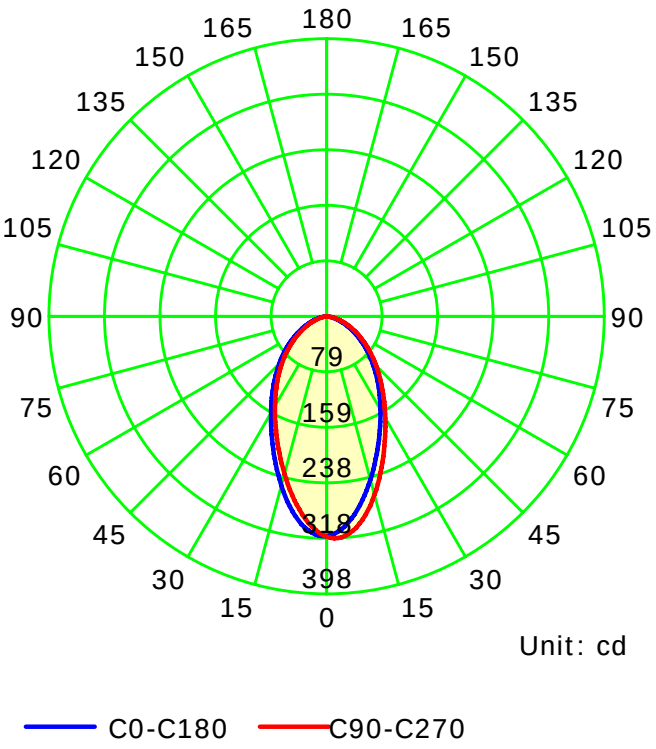
Luminaire Manufacturer:
Luminaire Category: Track Lighting
Luminaire Description: HCP-10X1000-5W-4000K
Lamp Catalog: COB
Luminous Length (mm): -38
Luminous Width (mm): -38
Luminous Height (mm): 0
Voltage: 230.7 V
Current: 0.042 A
Power: 4.89 W
Power Factor: 0.508

Photometric Results

CIE Class: Direct
Total Rated Lamp Lumens: 444.9 lm
Measurement Flux: 444.9 lm
Efficiency: 100%
Downward Ratio: 100%
Upward Ratio: 0%
Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 132.3, 132.1, 132.6, 132.1
Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 59.8, 59.5, 60.0, 59.7
Luminaire Efficacy Rating (LER): 91.03
Central Intensity: 315.08 cd
Max. Intensity: 318.49 cd
Pos of Max. Intensity: H90 V2
S/MH(C0/C180): 0.82
S/MH(C90/C270): 0.83

Picture Of Luminaire

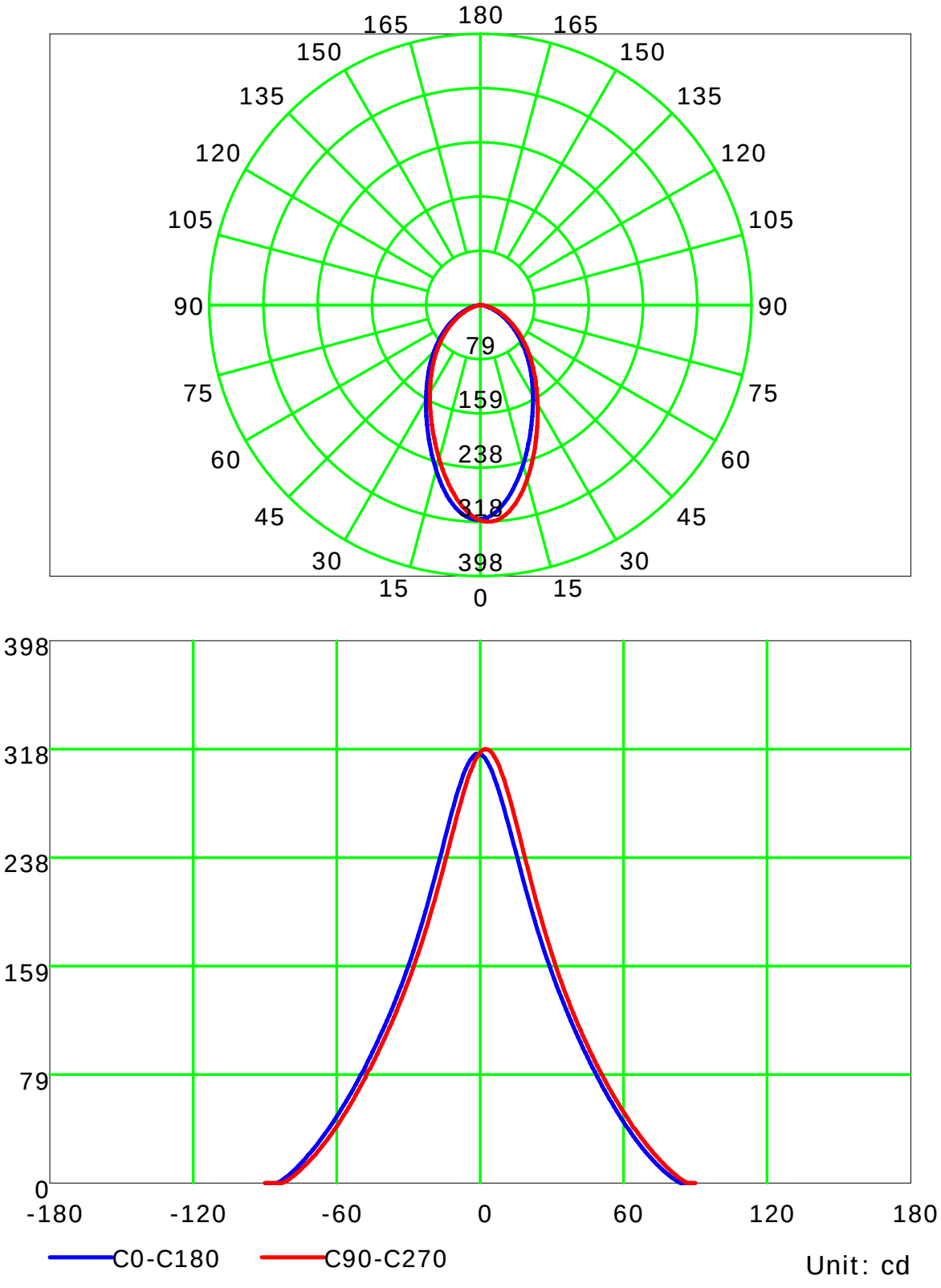
Luminous Intensity Distribution Curve



C Plane (°):0.0-360.0: 45.0
Gamma Plane (°):0.0-90.0:1.0
Test Lab: Havit Commercial
Test Device: GPM-1600L
Test Type: TYPE C
Distance: 6.583 m
Temperature: 25°C
Humidity:
Operator: DING LI
Inspector:

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Luminous Intensity Distribution Curve

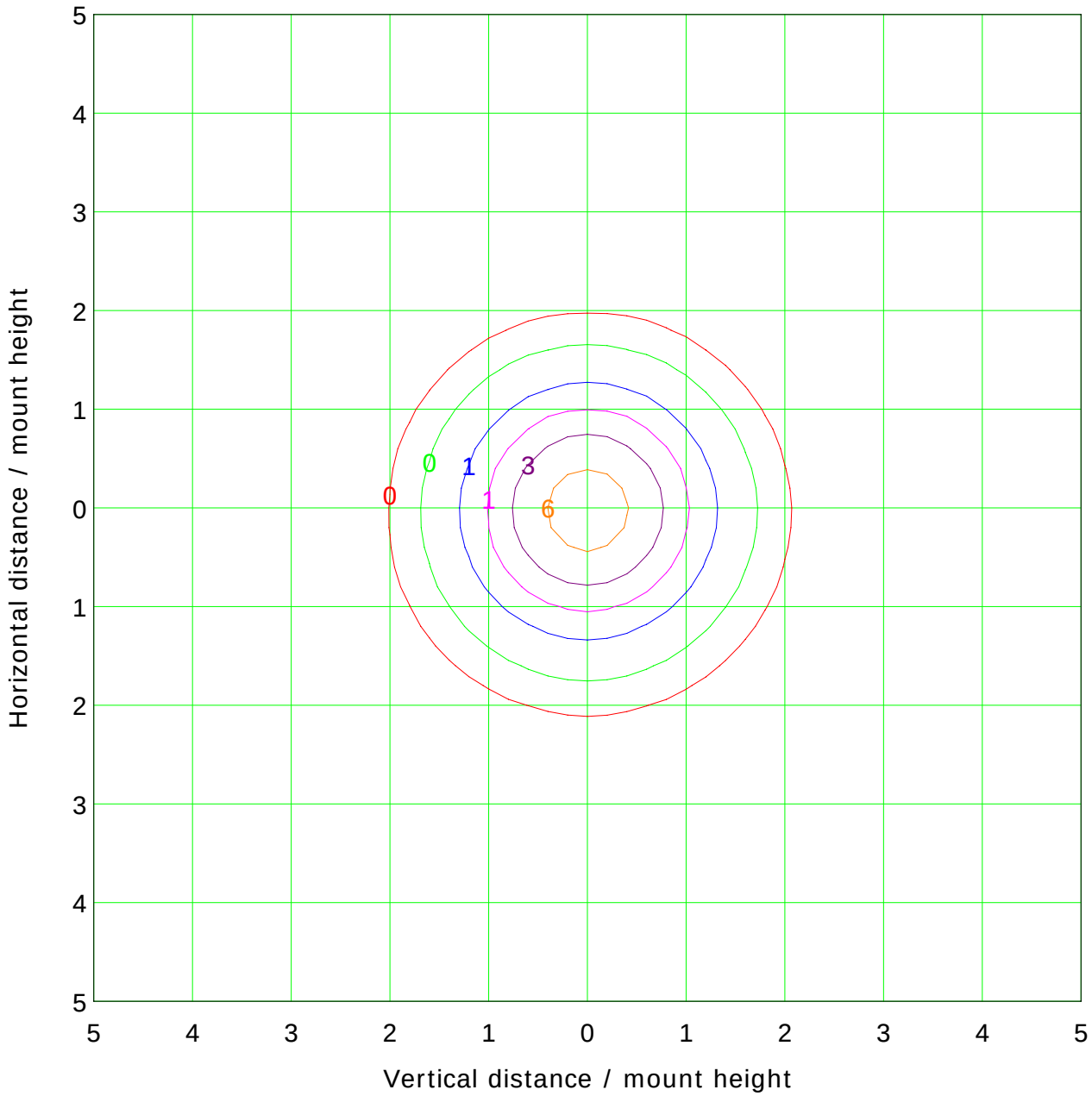


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IsoLux Plot



Mounting Height: 5.0m Max Lux(100%): 12.7 lx

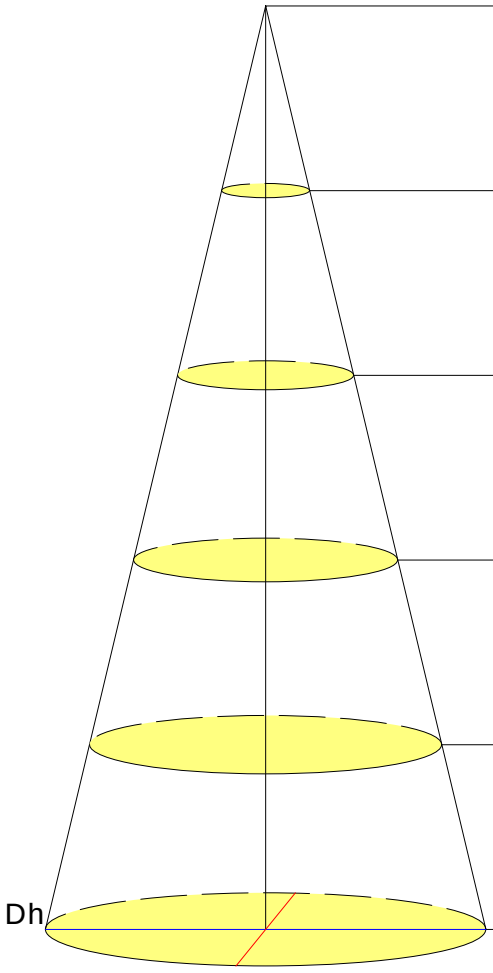
(1%): 0.1 lx	(2%): 0.3 lx
(5%): 0.6 lx	(10%): 1.3 lx
(20%): 2.5 lx	(50%): 6.4 lx
(100%): 12.7 lx	

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Illuminance at a Distance



Dist(m)	Enadir(lx)	Dh/Dv_B(m)	S_B(sq.m)	Eav_B(lx)
1.0	315.08	1.15/1.14	1.0	110.58
2.0	78.77	2.30/2.28	4.2	27.65
3.0	35.01	3.45/3.43	9.4	12.29
4.0	19.69	4.60/4.57	16.7	6.91
5.0	12.60	5.75/5.71	26.1	4.42

Beam Angle(B): H59.8 V59.5 Field Angle(F): H132.3 V132.1

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Inspector:

UGR Table

Reflectance:										
Ceiling (cavity)	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions	Viewed crosswise					Viewed endwise				
X=2H Y=2H	27.5	28.7	27.8	28.9	29.2	27.7	28.9	28.0	29.1	29.3
3H	28.3	29.4	28.7	29.7	30.0	28.6	29.7	28.9	29.9	30.2
4H	28.6	29.6	28.9	29.9	30.2	28.9	29.9	29.2	30.2	30.4
6H	28.6	29.6	29.0	29.9	30.2	29.0	29.9	29.3	30.2	30.5
8H	28.6	29.5	29.0	29.8	30.1	29.0	29.9	29.4	30.2	30.5
12H	28.6	29.4	28.9	29.8	30.1	29.0	29.8	29.3	30.2	30.5
X=4H Y=2H	28.0	29.0	28.3	29.3	29.6	28.1	29.1	28.4	29.4	29.7
3H	29.0	29.8	29.3	30.2	30.5	29.2	30.0	29.5	30.4	30.7
4H	29.3	30.0	29.7	30.4	30.8	29.5	30.3	29.9	30.7	31.0
6H	29.4	30.1	29.8	30.4	30.8	29.7	30.4	30.1	30.8	31.2
8H	29.4	30.0	29.8	30.4	30.8	29.7	30.4	30.2	30.8	31.2
12H	29.3	29.9	29.8	30.3	30.7	29.7	30.3	30.2	30.7	31.1
X=8H Y=4H	29.4	30.0	29.8	30.4	30.8	29.6	30.3	30.1	30.7	31.1
6H	29.5	30.0	30.0	30.5	30.9	29.9	30.4	30.3	30.8	31.3
8H	29.5	30.0	30.0	30.4	30.9	29.9	30.4	30.4	30.8	31.3
12H	29.5	29.9	30.0	30.4	30.9	29.9	30.3	30.4	30.8	31.3
X=12H Y=4H	29.4	29.9	29.8	30.3	30.8	29.6	30.2	30.1	30.6	31.0
6H	29.5	30.0	30.0	30.4	30.9	29.9	30.3	30.3	30.8	31.2
8H	29.5	29.9	30.0	30.4	30.9	29.9	30.3	30.4	30.8	31.3
Variations with the observer position at spacings:										
S=1.0H	+0.3/-0.4					+0.3/-0.5				
S=1.5H	+0.5/-1.0					+0.6/-1.2				
S=2.0H	+1.1/-1.8					+0.9/-2.0				

Calculate in accordance with CIE Pub.117. The table is revised with 445lm (8log(F/F0) = -2.8).

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Test Lab: Havit Commercial
Test Type: TYPE C
Temperature: 25°C
Operator: DING LI

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1600L
Distance: 6.583 m
Humidity:
Inspector:

Candlepower Table

Unit: cd

G\C	C0.0	C45.0	C90.0	C135.0	C180.0	C225.0	C270.0	C315.0	C360.0	
G0.0	315.1	316.0	316.1	316.0	315.1	316.0	316.1	316.0	315.1	
G1.0	313.9	316.6	317.8	316.9	315.3	314.5	313.7	314.0	313.9	
G2.0	312.1	316.4	318.5	317.0	314.8	312.3	310.8	311.5	312.1	
G3.0	309.3	315.2	318.3	316.2	313.1	309.2	306.6	308.1	309.3	
G4.0	306.0	313.2	317.5	314.8	310.9	305.7	302.4	304.3	306.0	
G5.0	302.2	310.9	315.8	312.2	307.9	301.5	297.8	299.9	302.2	
G6.0	297.2	307.1	313.0	309.3	304.3	296.3	292.0	294.4	297.2	
G7.0	292.3	303.2	309.8	305.6	300.1	291.4	286.6	289.1	292.3	
G8.0	287.0	298.5	306.1	300.9	294.8	285.8	280.0	283.6	287.0	
G9.0	281.1	293.3	301.0	296.2	289.7	279.3	274.1	277.0	281.1	
G10.0	275.1	288.0	296.3	290.9	284.0	273.6	267.5	271.0	275.1	
G11.0	268.5	281.9	290.6	284.8	277.5	266.5	260.6	264.2	268.5	
G12.0	262.4	275.6	284.6	278.7	271.5	260.4	254.3	257.6	262.4	
G13.0	255.9	269.5	278.7	272.6	264.9	253.7	247.5	251.5	255.9	
G14.0	249.1	262.6	271.8	265.4	258.0	246.8	240.7	244.1	249.1	
G15.0	242.8	256.1	265.1	259.0	251.4	240.0	234.0	237.8	242.8	
G16.0	236.2	249.0	258.6	251.8	243.9	233.8	227.2	231.3	236.2	
G17.0	229.4	242.8	251.4	245.0	237.6	227.1	220.8	224.4	229.4	
G18.0	222.9	236.1	244.4	238.4	231.3	220.6	214.6	218.3	222.9	
G19.0	216.1	229.2	237.2	231.0	224.3	214.0	207.9	211.5	216.1	
G20.0	210.2	222.5	230.6	224.5	217.8	207.8	202.0	205.6	210.2	
G21.0	204.0	215.8	223.8	217.7	211.6	202.1	196.3	199.7	204.0	
G22.0	197.8	209.7	216.9	211.4	204.8	195.6	190.0	193.5	197.8	
G23.0	192.0	203.9	210.3	205.0	198.9	190.0	184.6	187.8	192.0	
G24.0	185.8	197.2	203.6	198.3	192.7	184.5	178.7	182.5	185.8	
G25.0	180.4	191.4	197.6	192.4	186.9	178.6	173.5	176.8	180.4	
G26.0	175.0	185.9	191.5	186.8	181.5	173.4	168.4	171.5	175.0	
G27.0	169.5	180.0	185.3	180.3	175.6	167.7	163.3	166.0	169.5	
G28.0	164.6	174.5	179.6	175.0	170.2	162.8	158.2	161.3	164.6	
G29.0	159.6	168.8	174.0	169.3	164.7	157.8	153.0	156.4	159.6	
G30.0	154.6	163.9	168.1	164.0	159.6	152.6	148.2	151.2	154.6	
G31.0	149.8	158.6	163.0	159.1	154.9	148.1	143.9	146.8	149.8	
G32.0	144.9	153.8	157.4	153.9	149.8	143.3	139.2	141.9	144.9	
G33.0	140.5	148.9	152.4	148.9	145.1	138.8	134.9	137.5	140.5	
G34.0	136.2	144.5	147.7	144.4	140.9	134.7	130.7	133.4	136.2	
G35.0	131.6	139.5	142.4	139.3	135.9	130.0	126.0	128.8	131.6	
G36.0	127.4	135.3	138.1	134.9	131.9	125.8	122.0	124.7	127.4	

C Plane (°):0.0-360.0: 45.0
Test Lab: Havit Commercial
Test Type: TYPE C
Temperature: 25°C
Operator: DING LI

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1600L
Distance: 6.583 m
Humidity:
Inspector:

Candlepower Table (Continue 1)

Unit: cd

G\C	C0.0	C45.0	C90.0	C135.0	C180.0	C225.0	C270.0	C315.0	C360.0	
G37.0	123.2	130.8	133.6	130.1	127.3	122.0	117.8	120.8	123.2	
G38.0	119.0	126.5	128.9	125.8	123.4	117.8	114.1	116.5	119.0	
G39.0	114.9	122.3	124.7	122.0	119.3	113.8	110.2	112.6	114.9	
G40.0	110.9	118.0	120.4	117.6	115.1	109.8	106.2	108.5	110.9	
G41.0	107.0	114.0	116.3	113.6	111.5	105.9	102.5	104.9	107.0	
G42.0	103.3	110.4	112.4	109.8	107.7	102.3	98.8	101.2	103.3	
G43.0	99.3	106.3	108.2	105.8	103.7	98.4	95.0	97.2	99.3	
G44.0	95.8	102.8	104.6	102.1	100.0	94.9	91.5	93.6	95.8	
G45.0	92.2	98.6	100.7	98.1	96.3	91.6	87.8	90.3	92.2	
G46.0	88.5	95.2	96.8	94.6	92.8	87.7	84.2	86.4	88.5	
G47.0	84.9	91.5	93.4	91.2	89.4	84.2	82.0	83.0	84.9	
G48.0	81.9	87.7	89.6	87.4	85.6	81.8	77.6	79.8	81.9	
G49.0	78.2	84.3	86.1	84.0	82.0	77.6	74.4	76.4	78.2	
G50.0	74.9	82.0	82.7	81.6	79.4	74.5	71.1	73.3	74.9	
G51.0	71.4	77.7	79.6	77.5	75.8	71.1	67.8	69.7	71.4	
G52.0	68.3	74.4	76.2	74.2	72.5	68.0	64.9	66.7	68.3	
G53.0	65.4	71.0	73.1	70.9	69.3	65.2	61.6	63.7	65.4	
G54.0	62.0	67.9	69.8	67.9	66.2	61.8	58.6	60.6	62.0	
G55.0	59.3	64.9	66.7	64.8	63.2	59.1	55.6	57.7	59.3	
G56.0	56.2	61.6	63.6	61.6	60.2	56.0	52.7	54.6	56.2	
G57.0	53.2	58.7	60.7	58.7	57.4	53.1	50.0	51.7	53.2	
G58.0	50.6	56.0	58.0	56.0	54.6	50.5	47.2	48.9	50.6	
G59.0	47.6	53.0	54.8	53.0	51.7	47.5	44.3	46.0	47.6	
G60.0	44.9	50.3	52.3	50.3	48.9	44.8	41.6	43.2	44.9	
G61.0	42.1	47.4	49.5	47.5	46.1	42.2	39.3	41.0	42.1	
G62.0	39.8	44.8	46.8	44.8	43.5	39.8	36.8	38.3	39.8	
G63.0	37.3	42.3	44.2	42.3	41.0	37.2	34.3	35.8	37.3	
G64.0	34.7	39.8	41.0	40.2	38.5	34.5	31.8	33.3	34.7	
G65.0	32.3	37.3	39.3	37.5	36.0	32.3	29.6	31.0	32.3	
G66.0	30.1	34.7	36.9	35.0	33.7	29.9	27.4	28.9	30.1	
G67.0	27.7	32.3	34.3	32.5	31.3	27.5	25.2	26.5	27.7	
G68.0	25.5	30.2	32.0	30.3	28.9	25.5	23.2	24.4	25.5	
G69.0	23.3	27.8	29.7	28.0	26.7	23.3	20.7	22.5	23.3	
G70.0	21.3	25.7	27.4	25.8	24.5	21.1	19.1	20.5	21.3	
G71.0	19.4	23.6	25.4	23.7	22.4	19.3	17.2	18.5	19.4	
G72.0	17.4	21.4	23.3	21.6	20.6	17.1	15.2	16.5	17.4	
G73.0	15.6	19.5	21.2	19.7	18.3	15.3	13.5	14.6	15.6	

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Candlepower Table (Continue 2)

Unit: cd

G\C	C0.0	C45.0	C90.0	C135.0	C180.0	C225.0	C270.0	C315.0	C360.0	
G74.0	13.7	17.5	19.4	17.6	16.3	13.6	11.7	13.0	13.7	
G75.0	12.0	15.6	17.3	15.8	14.5	11.7	10.1	11.1	12.0	
G76.0	10.3	13.8	15.5	13.9	12.7	9.9	8.4	9.6	10.3	
G77.0	8.6	12.1	13.7	12.1	10.8	8.3	6.9	7.9	8.6	
G78.0	7.2	10.3	11.9	10.4	9.2	6.7	5.5	6.5	7.2	
G79.0	5.8	8.8	10.3	8.9	7.6	5.3	4.1	5.1	5.8	
G80.0	4.3	7.2	8.5	7.3	5.9	3.9	2.8	3.8	4.3	
G81.0	3.1	5.7	7.1	5.8	4.6	2.6	1.7	2.6	3.1	
G82.0	2.0	4.3	5.7	4.3	3.2	1.5	0.7	1.5	2.0	
G83.0	0.8	3.2	4.2	3.0	2.0	0.4	0.1	0.5	0.8	
G84.0	0.0	1.9	2.9	1.9	0.9	0.0	0.0	0.0	0.0	
G85.0	0.0	0.9	1.7	0.8	0.0	0.0	0.0	0.0	0.0	
G86.0	0.0	0.1	0.8	0.0	0.0	0.0	0.0	0.0	0.0	
G87.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G88.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G89.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

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