HAVIT COMMERCIAL
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Report No.: 001 Test Time: 2019-04-29 19:10

Luminaire Property

Luminaire Manufacturer:
Luminaire Category: Outdoor lighting
Luminaire Description: HCP-212080,HCP-213080(5500K)
Lamp Catalog: COB Luminous Length (mm): -80
Luminous Width (mm): -80 Luminous Height (mm): 0
Voltage: 230V Current: 0.077A
Power: 8.46W Power Factor: 0.472

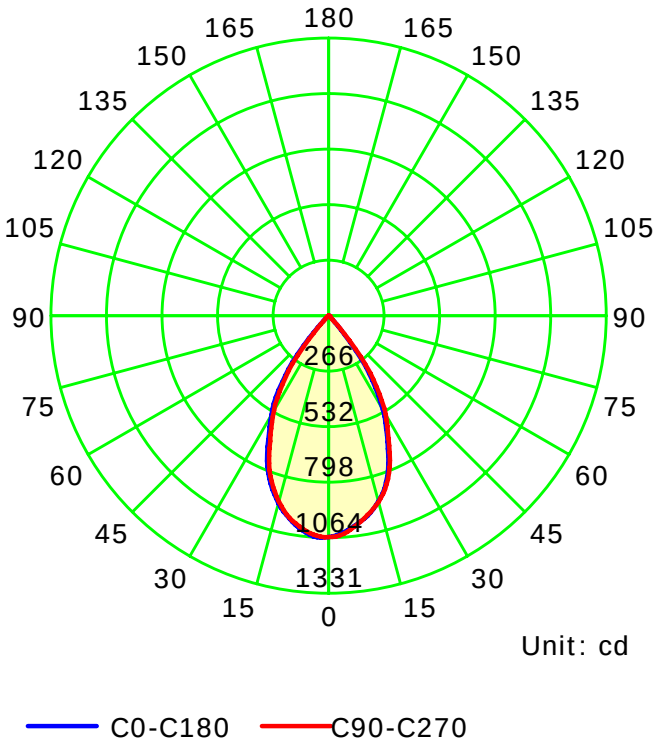
Photometric Results

CIE Class: Direct Total Rated Lamp Lumens: 930.7 lm
Measurement Flux: 930.7 lm Efficiency: 100%
Downward Ratio: 100% Upward Ratio: 0%
Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 82.6, 82.4, 82.6, 82.5
Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 60.3, 60.4, 60.1, 60.2
Luminaire Efficacy Rating (LER): 110.06 Central Intensity: 1061.2 cd
Max. Intensity: 1064.83 cd Pos of Max. Intensity: H180 V2
S/MH(C0/C180): 0.90 S/MH(C90/C270): 0.90

Picture Of Luminaire



Luminous Intensity Distribution Curve



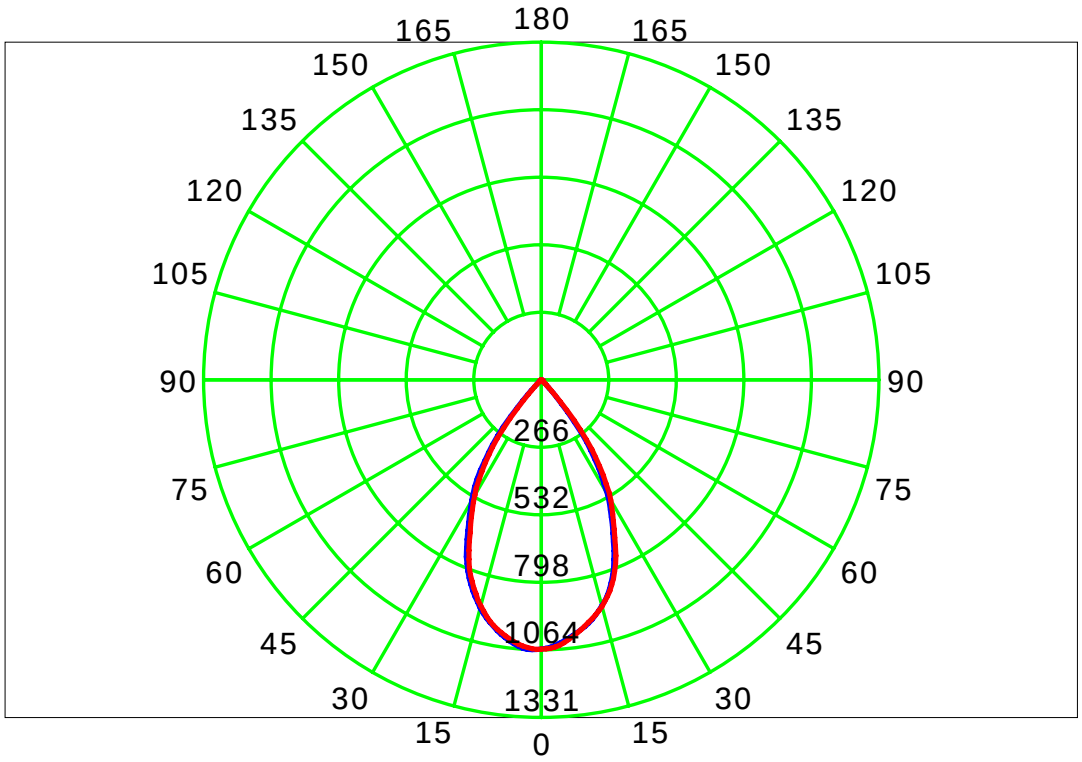
Unit: cd

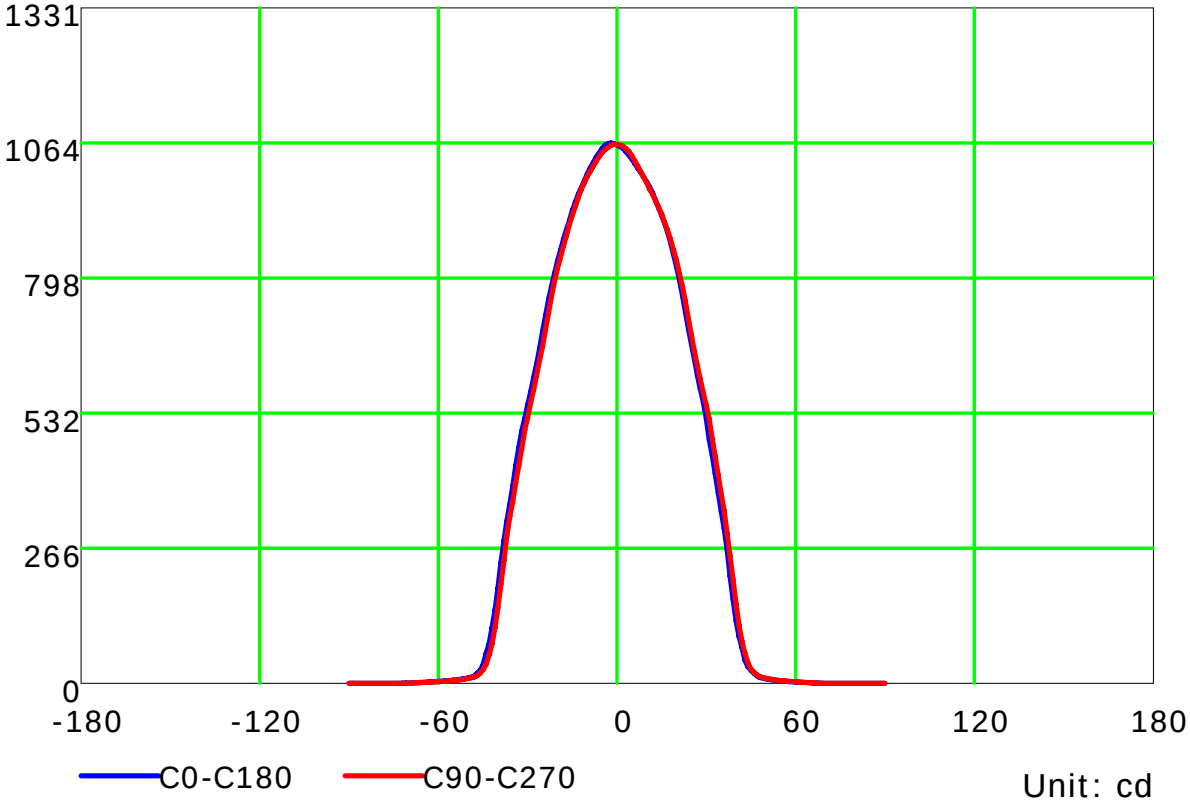
C0-C180 C90-C270

C Plane (°):0.0-360.0: 30.0 Gamma Plane (°):0.0-90.0:1.0
Test Lab: 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



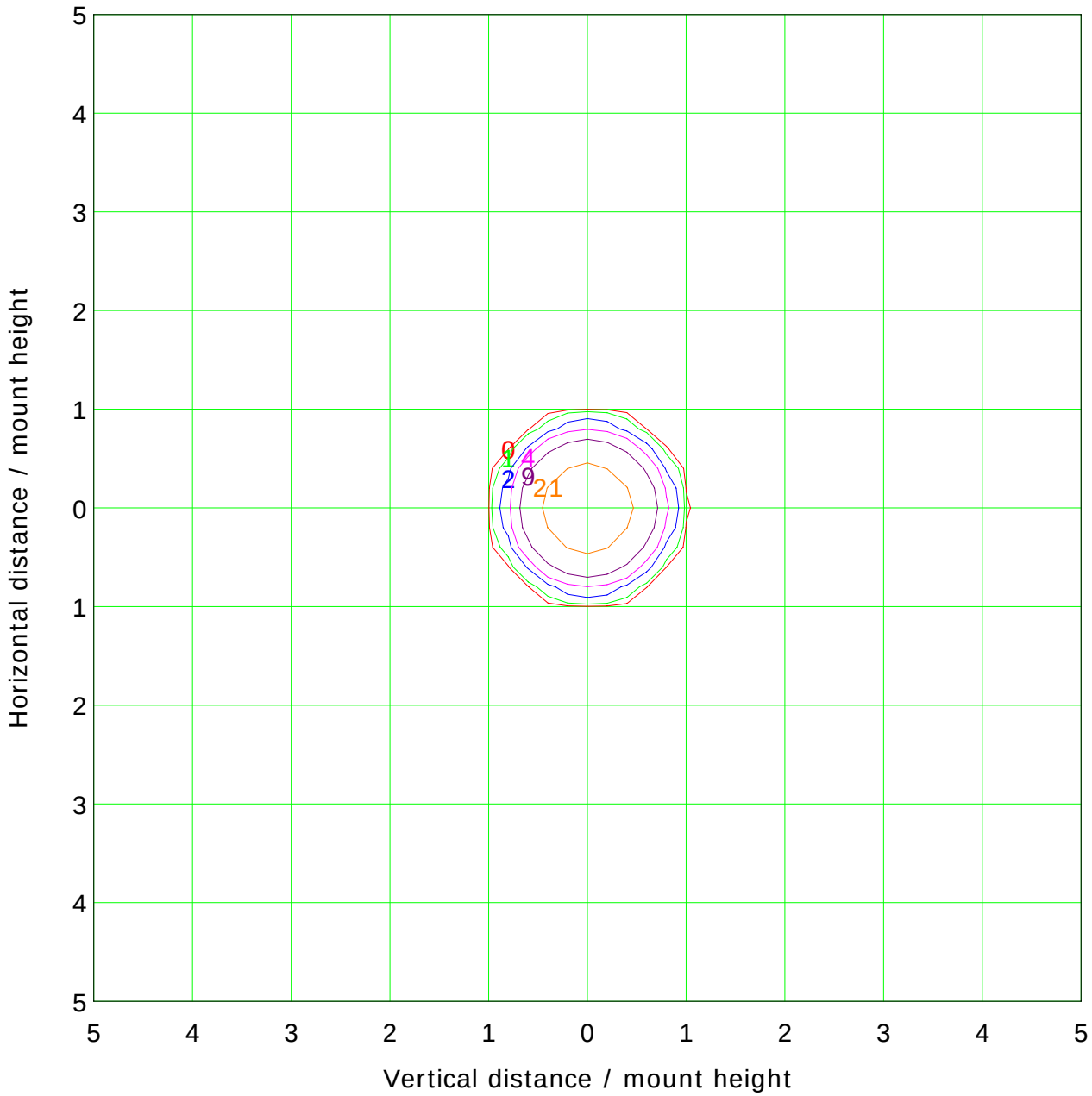


C Plane (°):0.0-360.0: 30.0
Test Lab:
Test Type: TYPE C
Temperature: 25°C
Operator: DING LI

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1600L
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Humidity:
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IsoLux Plot



Mounting Height: 5.0m Max Lux(100%): 42.5 lx

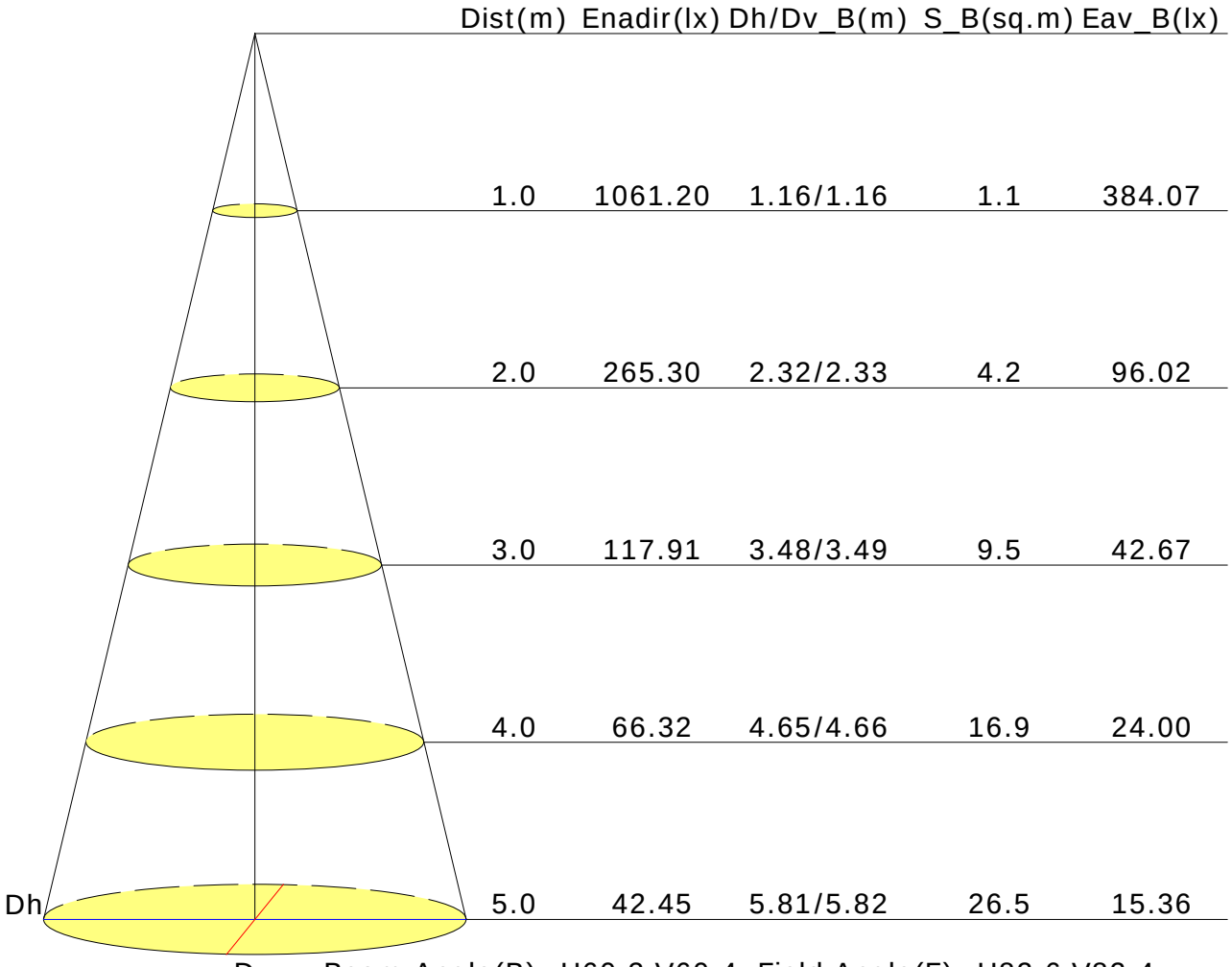
(1%): 0.4 lx	(2%): 0.9 lx
(5%): 2.1 lx	(10%): 4.3 lx
(20%): 8.5 lx	(50%): 21.3 lx
(100%): 42.5 lx	

C Plane (°):0.0-360.0: 30.0
Test Lab:
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:

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Illuminance at a Distance



C Plane (°):0.0-360.0: 30.0
Test Lab:
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:

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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	18.5	19.4	18.8	19.6	19.8	18.8	19.6	19.0	19.8	20.0
3H	18.4	19.2	18.7	19.4	19.7	18.6	19.4	18.9	19.7	19.9
4H	18.3	19.1	18.6	19.3	19.6	18.6	19.3	18.9	19.5	19.8
6H	18.3	18.9	18.6	19.2	19.5	18.5	19.2	18.8	19.4	19.7
8H	18.2	18.9	18.6	19.2	19.5	18.5	19.1	18.8	19.4	19.7
12H	18.2	18.8	18.5	19.1	19.4	18.4	19.0	18.8	19.3	19.7
X=4H Y=2H	18.3	19.1	18.6	19.3	19.6	18.6	19.3	18.9	19.5	19.8
3H	18.2	18.8	18.5	19.1	19.4	18.4	19.0	18.8	19.3	19.7
4H	18.1	18.6	18.5	19.0	19.3	18.3	18.9	18.7	19.2	19.6
6H	18.0	18.5	18.4	18.9	19.3	18.3	18.7	18.7	19.1	19.5
8H	18.0	18.4	18.4	18.8	19.2	18.2	18.6	18.6	19.0	19.4
12H	17.9	18.3	18.4	18.7	19.2	18.2	18.6	18.6	19.0	19.4
X=8H Y=4H	18.0	18.4	18.4	18.8	19.2	18.2	18.6	18.6	19.0	19.4
6H	17.9	18.2	18.3	18.7	19.1	18.1	18.5	18.6	18.9	19.4
8H	17.8	18.1	18.3	18.6	19.1	18.1	18.4	18.6	18.8	19.3
12H	17.8	18.1	18.3	18.5	19.0	18.0	18.3	18.5	18.8	19.3
X=12H Y=4H	17.9	18.3	18.4	18.7	19.2	18.2	18.6	18.6	19.0	19.4
6H	17.8	18.1	18.3	18.6	19.1	18.1	18.4	18.6	18.8	19.3
8H	17.8	18.1	18.3	18.5	19.0	18.0	18.3	18.5	18.8	19.3
Variations with the observer position at spacings:										
S=1.0H	+5.3/-16.6					+5.2/-16.0				
S=1.5H	+8.1/-20.2					+8.1/-18.9				
S=2.0H	+10.1/-29.0					+10.1/-24.8				

Calculate in accordance with CIE Pub.117. The table is revised with 931lm (8log(F/F0) = -0.2).

C Plane (°):0.0-360.0: 30.0
Test Lab:
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	C30.0	C60.0	C90.0	C120.0	C150.0	C180.0	C210.0	C240.0	C270.0
G0.0	1061.2	1061.0	1061.2	1061.7	1062.0	1062.7	1061.2	1061.0	1061.2	1061.7
G1.0	1058.4	1058.8	1059.9	1060.9	1062.8	1063.7	1063.3	1063.3	1063.8	1062.5
G2.0	1054.5	1055.9	1057.8	1059.1	1061.8	1063.2	1064.8	1064.2	1062.2	1060.5
G3.0	1048.2	1048.9	1052.5	1054.3	1058.8	1059.7	1063.9	1062.7	1058.9	1056.6
G4.0	1040.8	1040.9	1045.2	1048.6	1052.4	1054.3	1060.9	1058.7	1054.2	1051.9
G5.0	1033.3	1032.2	1036.7	1039.9	1045.0	1046.9	1054.3	1052.4	1048.7	1046.1
G6.0	1024.6	1022.6	1025.7	1029.7	1035.0	1037.3	1045.3	1044.9	1041.0	1038.1
G7.0	1015.2	1013.5	1016.7	1019.2	1026.1	1027.6	1036.8	1036.0	1032.3	1028.9
G8.0	1006.8	1003.7	1008.0	1008.6	1015.0	1015.8	1026.5	1025.7	1022.3	1019.6
G9.0	997.1	994.0	996.0	997.7	1003.9	1004.9	1016.2	1013.7	1011.1	1008.8
G10.0	988.2	985.2	984.3	986.3	992.1	993.6	1003.8	1002.3	999.3	998.8
G11.0	978.0	974.3	973.2	973.7	979.5	981.4	990.5	989.2	987.1	986.4
G12.0	965.8	962.5	962.8	963.3	967.7	968.9	977.1	976.3	973.4	973.5
G13.0	951.9	950.0	950.5	950.8	955.3	956.6	964.6	960.6	956.5	958.0
G14.0	937.1	934.8	937.4	938.4	941.8	938.8	948.6	943.4	938.3	939.8
G15.0	921.7	921.4	924.1	924.8	928.1	922.5	932.2	926.7	920.8	922.5
G16.0	907.0	905.6	911.6	908.5	911.8	902.7	912.3	907.9	900.8	904.4
G17.0	889.0	889.1	894.9	893.0	891.7	883.5	894.1	888.0	880.7	882.0
G18.0	869.2	872.4	879.0	875.5	874.0	866.0	875.4	867.8	860.3	862.5
G19.0	845.4	848.8	858.5	854.3	852.3	843.3	853.3	845.2	836.8	839.2
G20.0	821.0	826.1	835.4	833.4	830.7	819.8	832.0	822.8	813.2	817.8
G21.0	794.8	798.5	811.1	807.5	805.8	794.3	808.2	799.9	789.8	792.7
G22.0	764.3	770.8	782.0	781.9	779.2	770.5	782.5	772.0	760.3	762.8
G23.0	733.0	740.9	754.2	753.7	752.2	741.9	757.3	745.1	730.3	730.9
G24.0	699.1	706.6	718.4	718.8	717.2	706.0	725.4	712.9	693.5	698.0
G25.0	668.0	675.0	685.8	686.5	684.3	673.0	693.6	676.0	661.7	664.1
G26.0	639.8	646.6	655.0	655.1	651.2	641.8	660.8	646.4	634.2	637.5
G27.0	607.3	614.8	623.6	625.8	621.5	610.9	629.7	616.0	603.4	607.5
G28.0	580.4	587.9	597.2	599.8	595.4	585.3	603.7	590.1	577.6	579.4
G29.0	554.2	558.6	570.7	572.7	569.6	557.8	574.8	563.9	549.3	553.2
G30.0	521.2	531.9	543.1	548.2	544.3	533.8	548.8	537.1	523.6	524.5
G31.0	480.4	496.2	514.6	521.1	520.3	509.2	522.9	512.9	499.1	499.0
G32.0	449.0	460.8	474.8	482.1	487.4	477.5	497.4	485.5	466.0	462.5
G33.0	413.6	427.5	443.2	448.8	453.3	443.1	465.5	453.2	434.8	430.5
G34.0	376.0	387.3	404.0	411.0	419.9	405.6	430.1	418.3	398.0	396.2
G35.0	339.0	349.7	363.2	373.4	380.4	369.8	389.1	378.1	361.4	358.8
G36.0	306.0	315.3	333.2	341.1	348.2	338.1	353.7	343.9	332.1	329.1

C Plane (°):0.0-360.0: 30.0
Test Lab:
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	C30.0	C60.0	C90.0	C120.0	C150.0	C180.0	C210.0	C240.0	C270.0
G37.0	263.4	270.1	292.5	295.4	309.7	297.1	320.2	313.3	293.5	290.9
G38.0	211.6	225.6	243.4	251.7	262.5	252.4	281.6	268.6	250.4	241.7
G39.0	165.5	182.9	196.7	204.5	216.0	205.7	238.6	228.0	203.6	195.6
G40.0	122.8	135.2	146.4	156.4	166.5	158.7	187.5	180.0	155.8	148.4
G41.0	92.7	100.2	108.5	115.2	125.9	120.5	145.1	141.1	116.1	109.8
G42.0	69.8	74.9	80.9	82.7	90.8	86.2	109.5	103.0	85.5	77.1
G43.0	45.9	51.7	59.8	59.6	64.4	63.2	77.9	73.8	64.0	56.1
G44.0	32.7	34.9	40.0	40.6	44.4	45.1	58.9	54.2	43.9	37.3
G45.0	25.8	26.1	28.4	28.1	31.1	30.1	36.4	34.0	28.8	26.6
G46.0	20.1	21.1	22.4	22.0	23.6	23.4	25.6	24.1	21.8	20.1
G47.0	14.9	15.9	17.1	17.3	18.2	17.9	19.9	18.5	16.4	15.0
G48.0	11.6	11.8	13.2	13.3	14.1	14.0	14.4	13.5	13.2	12.4
G49.0	10.3	10.5	11.0	11.4	12.2	12.3	12.2	11.9	11.8	11.0
G50.0	9.0	9.3	9.8	10.1	10.8	11.1	10.9	10.7	10.5	9.8
G51.0	7.8	8.1	8.7	9.0	9.6	9.8	9.8	9.6	9.3	8.7
G52.0	7.0	7.1	7.7	7.9	8.5	8.6	8.8	8.7	8.2	7.7
G53.0	6.2	6.2	6.8	7.0	7.6	7.7	7.8	7.8	7.4	6.9
G54.0	5.5	5.6	6.1	6.2	6.8	6.9	7.0	7.0	6.7	6.2
G55.0	4.9	4.9	5.4	5.6	6.1	6.2	6.3	6.3	6.1	5.7
G56.0	4.4	4.5	4.8	5.1	5.4	5.7	5.8	5.7	5.5	5.0
G57.0	4.0	4.0	4.3	4.5	4.9	5.2	5.3	5.2	5.0	4.6
G58.0	3.5	3.5	3.8	4.0	4.5	4.6	4.8	4.8	4.5	4.2
G59.0	3.1	3.1	3.5	3.6	3.9	4.2	4.3	4.3	4.1	3.7
G60.0	2.7	2.7	3.0	3.2	3.6	3.7	3.9	4.0	3.7	3.3
G61.0	2.3	2.3	2.6	2.8	3.2	3.3	3.5	3.5	3.3	3.0
G62.0	1.9	2.0	2.2	2.4	2.7	2.9	3.2	3.1	2.9	2.6
G63.0	1.7	1.6	2.0	2.1	2.5	2.6	2.9	2.9	2.7	2.3
G64.0	1.4	1.4	1.6	1.7	2.0	2.3	2.5	2.5	2.3	2.0
G65.0	1.1	1.1	1.4	1.5	1.8	2.0	2.1	2.2	2.0	1.7
G66.0	0.9	0.9	1.1	1.1	1.5	1.7	1.9	1.9	1.7	1.4
G67.0	0.4	0.6	0.8	0.8	1.1	1.4	1.6	1.7	1.5	1.2
G68.0	0.4	0.4	0.6	0.6	0.9	1.1	1.3	1.4	1.2	1.0
G69.0	0.1	0.2	0.3	0.3	0.6	0.9	0.9	1.2	1.1	0.8
G70.0	0.0	0.0	0.1	0.2	0.4	0.6	0.8	0.9	0.8	0.5
G71.0	0.0	0.0	0.0	0.0	0.2	0.5	0.7	0.8	0.6	0.3
G72.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4	0.6	0.4	0.0
G73.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.4	0.1	0.0

C Plane (°):0.0-360.0: 30.0
Test Lab:
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 2)

Unit: cd

G\C	C0.0	C30.0	C60.0	C90.0	C120.0	C150.0	C180.0	C210.0	C240.0	C270.0
G74.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0
G75.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
G76.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
G77.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
G78.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
G79.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
G80.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
G81.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
G82.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
G83.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
G84.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
G85.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
G86.0	0.0	0.0	0.0	0.0	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	0.0
G88.0	0.0	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	0.0
G90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

C Plane (°):0.0-360.0: 30.0
Test Lab:
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 3)

Unit: cd

G\C	C300.0	C330.0	C360.0							
G0.0	1062.0	1062.7	1061.2							
G1.0	1061.7	1060.9	1058.4							
G2.0	1058.6	1058.4	1054.5							
G3.0	1054.2	1054.9	1048.2							
G4.0	1048.1	1048.4	1040.8							
G5.0	1041.8	1041.2	1033.3							
G6.0	1034.0	1034.1	1024.6							
G7.0	1026.6	1026.9	1015.2							
G8.0	1015.8	1018.0	1006.8							
G9.0	1006.3	1007.7	997.1							
G10.0	997.9	999.7	988.2							
G11.0	986.8	989.5	978.0							
G12.0	974.9	979.4	965.8							
G13.0	959.9	966.3	951.9							
G14.0	942.9	950.8	937.1							
G15.0	925.8	934.6	921.7							
G16.0	906.9	919.6	907.0							
G17.0	889.2	901.0	889.0							
G18.0	870.3	883.0	869.2							
G19.0	847.4	860.0	845.4							
G20.0	823.9	836.5	821.0							
G21.0	799.0	810.5	794.8							
G22.0	767.5	781.7	764.3							
G23.0	736.2	751.7	733.0							
G24.0	700.7	717.2	699.1							
G25.0	668.2	683.2	668.0							
G26.0	639.6	653.5	639.8							
G27.0	608.2	620.1	607.3							
G28.0	579.1	592.2	580.4							
G29.0	548.5	564.6	554.2							
G30.0	523.0	534.5	521.2							
G31.0	493.0	504.4	480.4							
G32.0	455.6	463.0	449.0							
G33.0	424.8	434.3	413.6							
G34.0	389.9	396.7	376.0							
G35.0	352.0	360.6	339.0							
G36.0	321.4	330.1	306.0							

C Plane (°):0.0-360.0: 30.0
Test Lab:
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 4)

Unit: cd

G\C	C300.0	C330.0	C360.0							
G37.0	275.9	291.1	263.4							
G38.0	231.8	243.7	211.6							
G39.0	185.6	196.4	165.5							
G40.0	139.2	149.1	122.8							
G41.0	101.3	109.4	92.7							
G42.0	71.8	79.1	69.8							
G43.0	51.3	58.3	45.9							
G44.0	33.7	40.2	32.7							
G45.0	24.7	29.1	25.8							
G46.0	19.2	22.8	20.1							
G47.0	14.6	17.4	14.9							
G48.0	11.8	12.8	11.6							
G49.0	10.6	11.2	10.3							
G50.0	9.5	9.9	9.0							
G51.0	8.4	8.7	7.8							
G52.0	7.4	7.7	7.0							
G53.0	6.6	6.8	6.2							
G54.0	5.9	6.1	5.5							
G55.0	5.4	5.5	4.9							
G56.0	4.9	4.9	4.4							
G57.0	4.3	4.3	4.0							
G58.0	4.0	3.9	3.5							
G59.0	3.5	3.5	3.1							
G60.0	3.1	3.2	2.7							
G61.0	2.8	2.8	2.3							
G62.0	2.5	2.4	1.9							
G63.0	2.1	2.1	1.7							
G64.0	1.8	1.8	1.4							
G65.0	1.5	1.4	1.1							
G66.0	1.3	1.2	0.9							
G67.0	1.0	1.0	0.4							
G68.0	0.8	0.7	0.4							
G69.0	0.5	0.4	0.1							
G70.0	0.1	0.1	0.0							
G71.0	0.1	0.1	0.0							
G72.0	0.0	0.0	0.0							
G73.0	0.0	0.0	0.0							

C Plane (°):0.0-360.0: 30.0
Test Lab:
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:

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Candlepower Table (Continue 5)

Unit: cd

G\C	C300.0	C330.0	C360.0							
G74.0	0.0	0.0	0.0							
G75.0	0.0	0.0	0.0							
G76.0	0.0	0.0	0.0							
G77.0	0.0	0.0	0.0							
G78.0	0.0	0.0	0.0							
G79.0	0.0	0.0	0.0							
G80.0	0.0	0.0	0.0							
G81.0	0.0	0.0	0.0							
G82.0	0.0	0.0	0.0							
G83.0	0.0	0.0	0.0							
G84.0	0.0	0.0	0.0							
G85.0	0.0	0.0	0.0							
G86.0	0.0	0.0	0.0							
G87.0	0.0	0.0	0.0							
G88.0	0.0	0.0	0.0							
G89.0	0.0	0.0	0.0							
G90.0	0.0	0.0	0.0							

C Plane (°):0.0-360.0: 30.0
Test Lab:
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: