

Report No.:

## LUMINAIRE PHOTOMETRIC TEST REPORT

### Luminaire Property

Luminaire Type: GSD-50W  
 Lamp Type: GALAXY SATURN DIRECT  
 Luminous Width: 600 mm  
 Luminous Length: 600 mm Luminous  
 Height: 38 mm

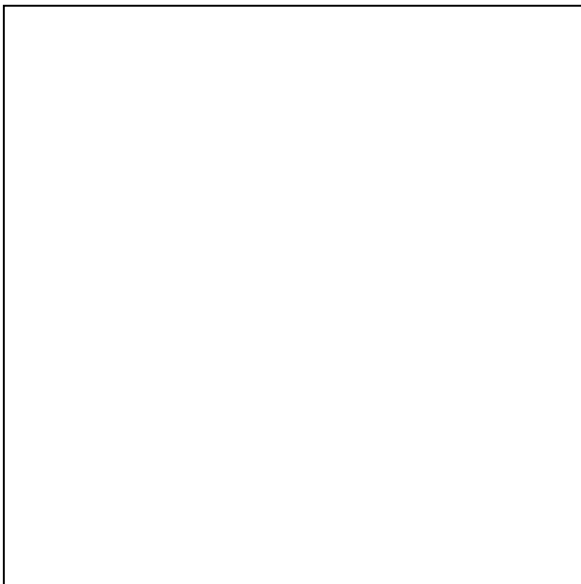
Voltage(V): 119.69 V  
 Current(A): 0.2220 A  
 Power(W): 47.87 W  
 Power Factor: 0.9810  
 Lamp Luminous Flux: 4682.63  
 Test Lab: \*Mercury Lighting

### Photometric Results

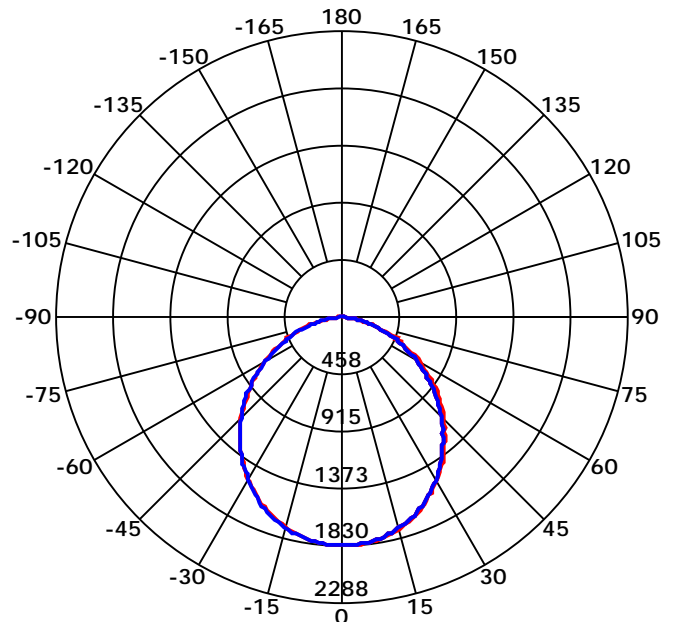
CIE Class: Direct  
 Luminaire Luminous Flux: 4682.63  
 Downward Ratio: 100.00%  
 Luminaire Efficacy Rating(LER): 97.83 lm/W  
 Beam Angle(50%Imax): L=-52.61 R=53.55  
 Field Angle(10%Imax): L=-79.00 R=78.90

Max. Intensity: 1830.31 cd  
 Max.Intensity Angle: C=0 Gamma=1  
 Upward Ratio: 0.00%  
 Efficacy: 100.00%  
 Center Intensity: 1829.25 cd

Picture of Luminaire



Luminous Intensity Distribution Curve



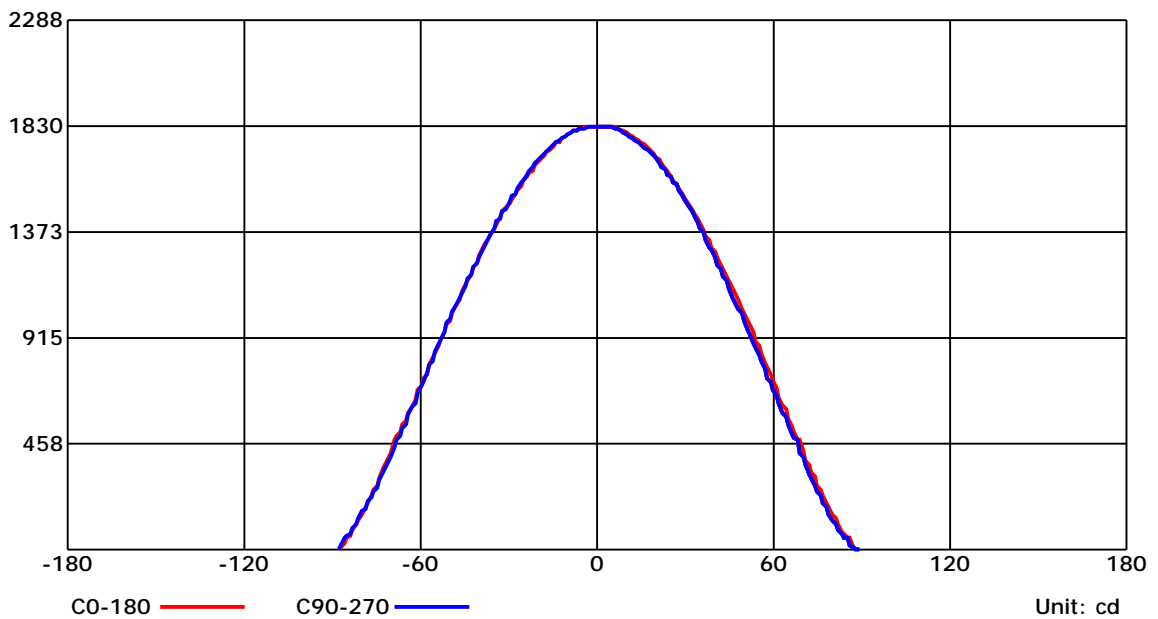
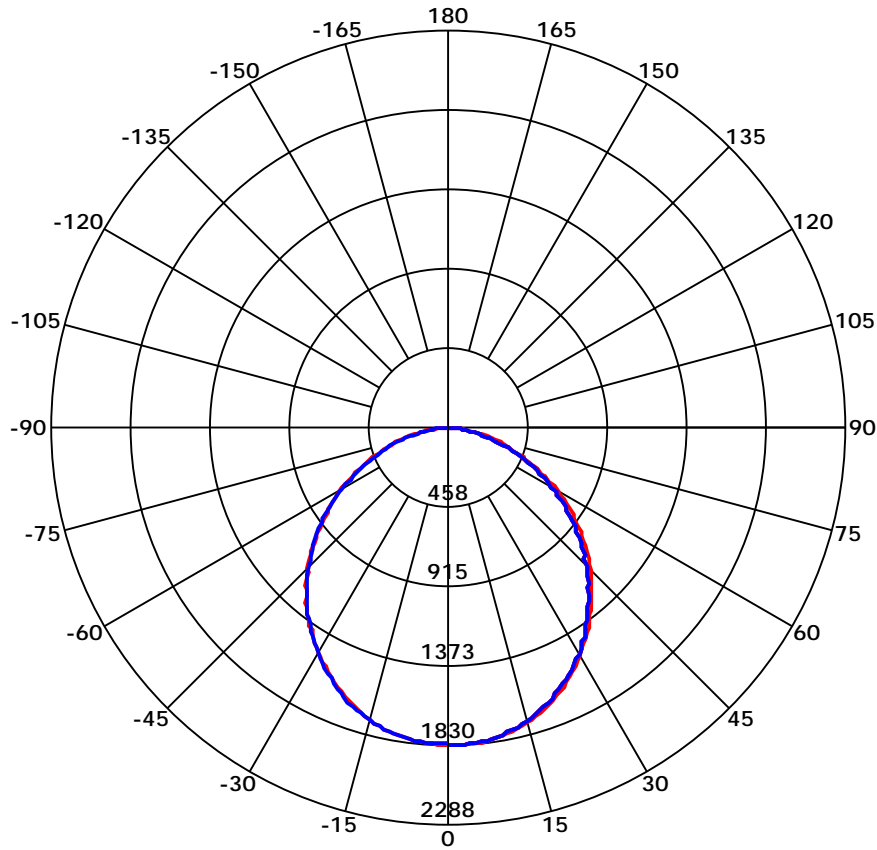
Beam Angle(50%Imax): 106.17 deg

C0-180 ——— C90-270 ———

C Range: 0 - 360 Deg  
 C Interval: 45.0 Deg  
 Test Speed: High  
 Temperature:  
 Operators:  
 Test Date: 2020/1/9 17:28:25

G Range: 0 - 90 Deg  
 G Interval: 1.0 Deg  
 Test System: Huipu CPM-1800B Goniophotometer  
 Humidity:  
 Test Distance: 5.95 m  
 Remarks:

### Luminous Intensity Distribution Curve



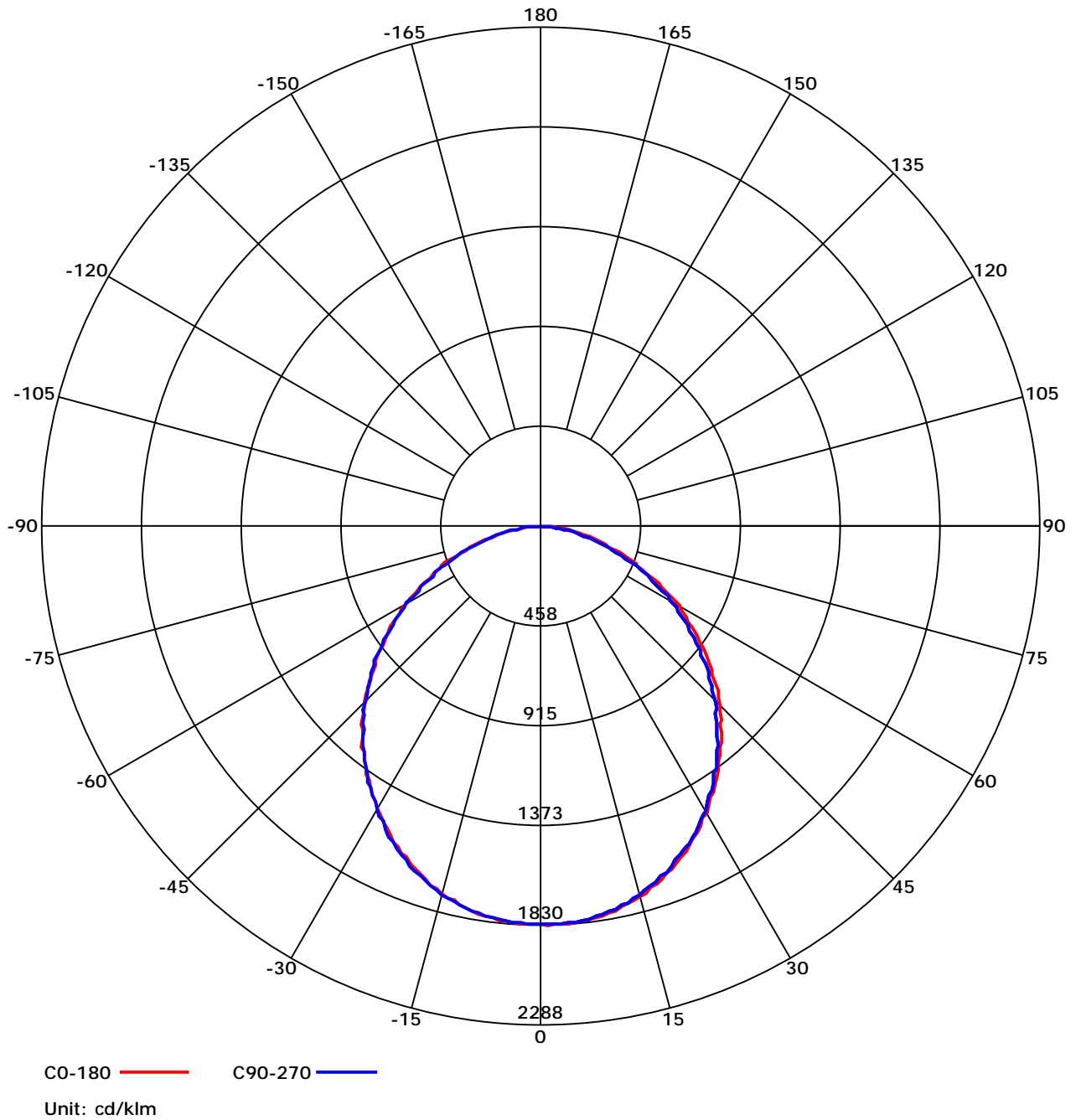
C Range: 0 - 360 Deg  
C Interval: 45.0 Deg  
Test Speed: High  
Temperature:  
Operators:  
Test Date: 2020/1/9 17:28:25

G Range: 0 - 90 Deg  
G Interval: 1.0 Deg  
Test System: Huipu CPM-1800B Goniophotometer  
Humidity:  
Test Distance: 5.95 m  
Remarks:

Report No.:

Test Time: 2020/1/9 17:28:25

### Luminous Intensity Distribution Curve



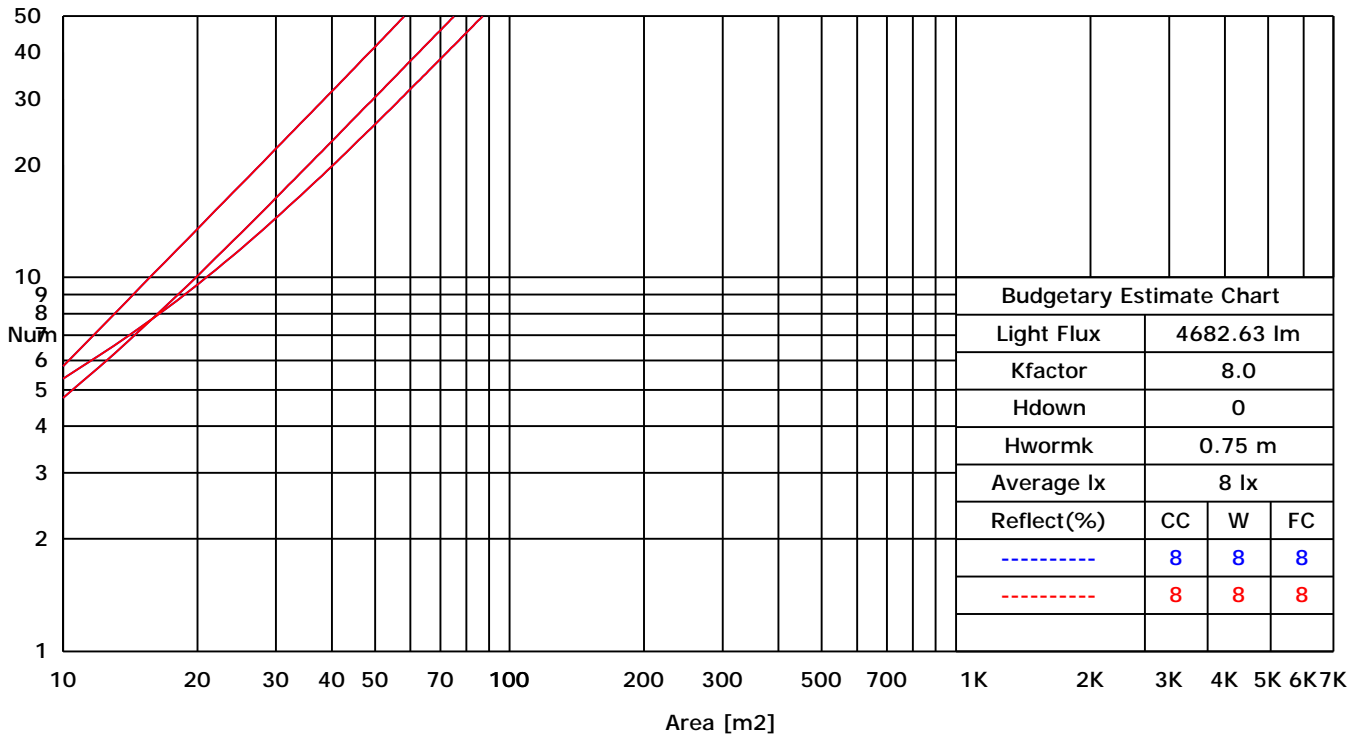
C Range: 0 - 360 Deg  
C Interval: 45.0 Deg  
Test Speed: High  
Temperature:  
Operators:  
Test Date: 2020/1/9 17:28:25

G Range: 0 - 90 Deg  
G Interval: 1.0 Deg  
Test System: Huipu CPM-1800B Goniophotometer  
Humidity:  
Test Distance: 5.95 m  
Remarks:

### UTILIZATION FACTORS TABLE

RHOCC	80			70			50			30			10			0
RHOW	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR	COEFFICIENTS OF UTILIZATION FOR RHOFC=20															
0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.08	1.06	1.05	1.06	1.04	1.03	1.02	1.00	0.99	0.97	0.95	0.94	0.91	0.89	0.87	0.82
2	0.96	0.94	0.93	0.95	0.93	0.91	0.92	0.90	0.87	0.88	0.85	0.83	0.83	0.80	0.77	0.72
3	0.86	0.84	0.83	0.86	0.83	0.81	0.84	0.80	0.77	0.81	0.77	0.73	0.77	0.72	0.69	0.64
4	0.78	0.75	0.74	0.77	0.74	0.72	0.76	0.72	0.69	0.74	0.69	0.66	0.71	0.66	0.62	0.58
5	0.71	0.68	0.67	0.70	0.67	0.65	0.70	0.65	0.62	0.68	0.63	0.59	0.66	0.60	0.56	0.52
6	0.64	0.62	0.61	0.64	0.61	0.59	0.64	0.60	0.57	0.63	0.58	0.54	0.61	0.55	0.51	0.47
7	0.59	0.57	0.56	0.59	0.56	0.54	0.59	0.55	0.52	0.58	0.53	0.49	0.57	0.51	0.47	0.43
8	0.55	0.52	0.51	0.55	0.52	0.50	0.55	0.51	0.48	0.54	0.49	0.46	0.54	0.48	0.43	0.40
9	0.51	0.49	0.47	0.51	0.48	0.46	0.51	0.47	0.44	0.51	0.46	0.42	0.50	0.44	0.40	0.37
10	0.47	0.45	0.44	0.48	0.45	0.43	0.48	0.44	0.41	0.48	0.43	0.39	0.47	0.42	0.37	0.35

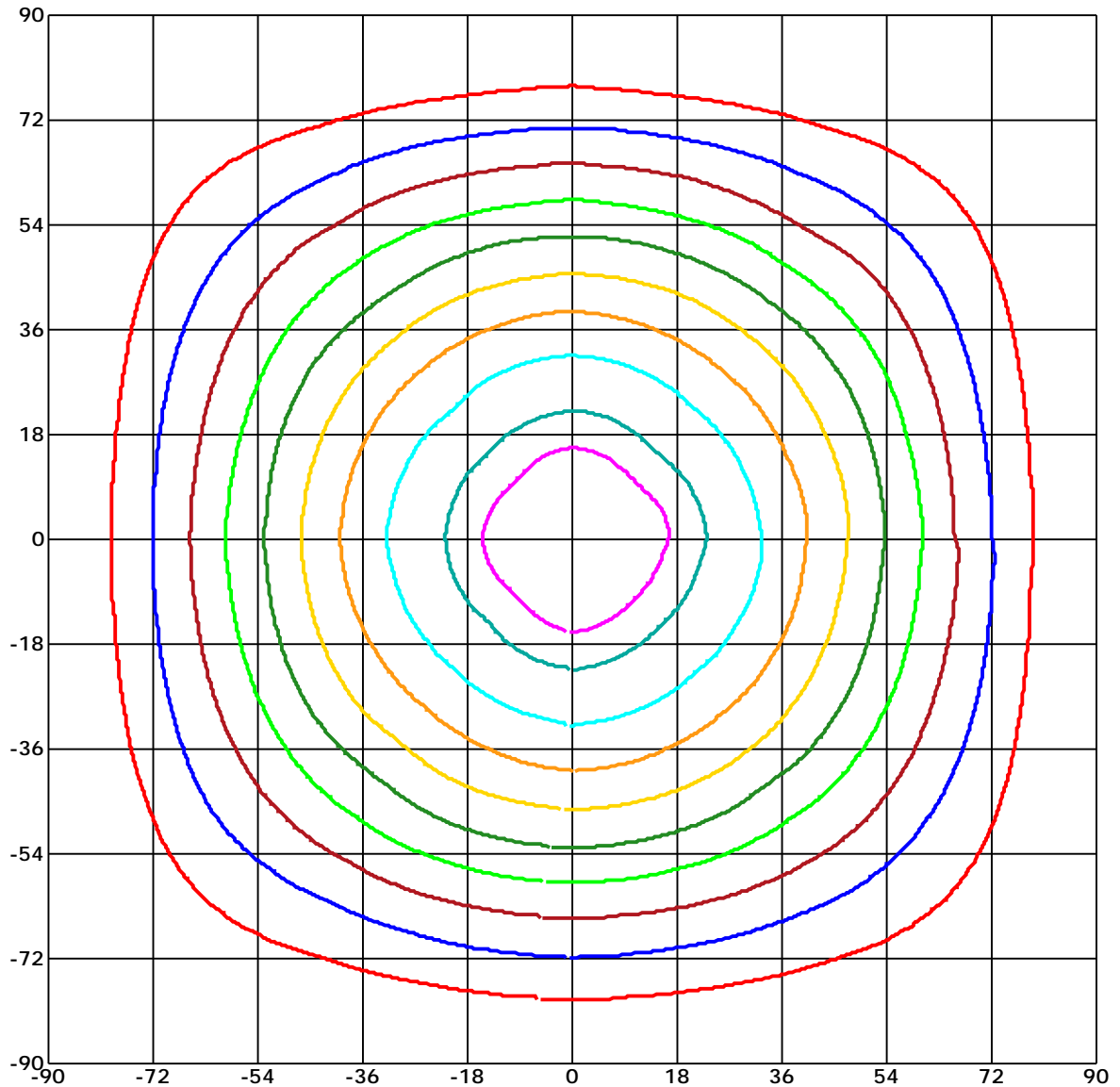
### LUMINAIRE BUDGETARY ESTIMATE DIAGRAM



C Range: 0 - 360 Deg  
 C Interval: 45.0 Deg  
 Test Speed: High  
 Temperature:  
 Operators:  
 Test Date: 2020/1/9 17:28:25

G Range: 0 - 90 Deg  
 G Interval: 1.0 Deg  
 Test System: Huipu CPM-1800B Goniophotometer  
 Humidity:  
 Test Distance: 5.95 m  
 Remarks:

### ISOCANDELA DIAGRAM (RECTANGULAR)



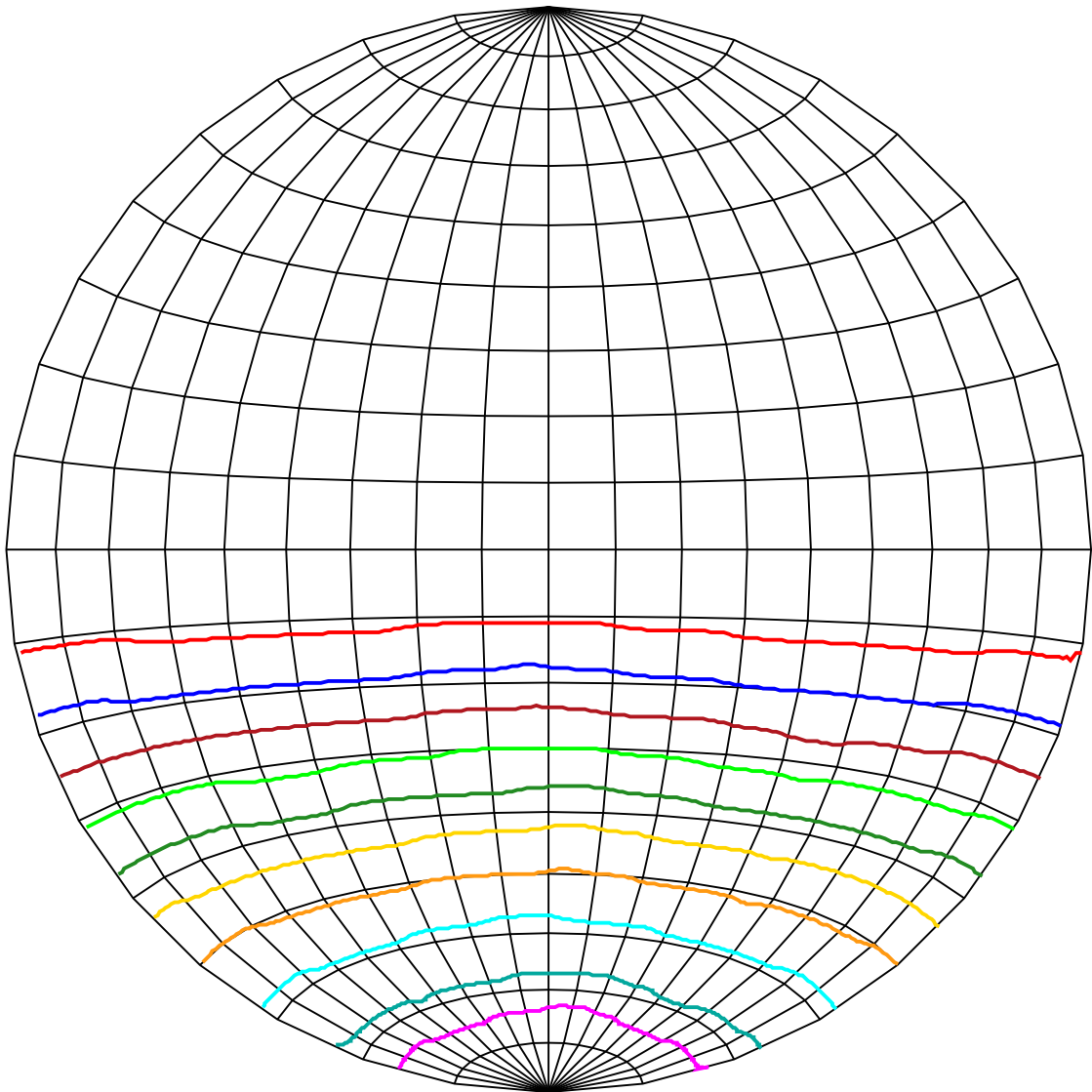
Unit of intensity:cd      Imax(100%): 1830.309 cd

- |                     |                    |
|---------------------|--------------------|
| — 1738.794(95%Imax) | — 915.155(50%Imax) |
| — 1647.278(90%Imax) | — 732.124(40%Imax) |
| — 1464.247(80%Imax) | — 549.093(30%Imax) |
| — 1281.216(70%Imax) | — 366.062(20%Imax) |
| — 1098.186(60%Imax) | — 183.031(10%Imax) |

C Range: 0 - 360 Deg  
C Interval: 45.0 Deg  
Test Speed: High  
Temperature:  
Operators:  
Test Date: 2020/1/9 17:28:25

G Range: 0 - 90 Deg  
G Interval: 1.0 Deg  
Test System: Huipu CPM-1800B Goniophotometer  
Humidity:  
Test Distance: 5.95 m  
Remarks:

### ISOCANDELA DIAGRAM (SPHERE)



Unit of intensity:cd      I<sub>max</sub>(100%): 1830.309 cd

- |                                  |                                 |
|----------------------------------|---------------------------------|
| — 1738.794(95%I <sub>max</sub> ) | — 915.155(50%I <sub>max</sub> ) |
| — 1647.278(90%I <sub>max</sub> ) | — 732.124(40%I <sub>max</sub> ) |
| — 1464.247(80%I <sub>max</sub> ) | — 549.093(30%I <sub>max</sub> ) |
| — 1281.216(70%I <sub>max</sub> ) | — 366.062(20%I <sub>max</sub> ) |
| — 1098.186(60%I <sub>max</sub> ) | — 183.031(10%I <sub>max</sub> ) |

C Range: 0 - 360 Deg

C Interval: 45.0 Deg

Test Speed: High

Temperature:

Operators:

Test Date: 2020/1/9 17:28:25

G Range: 0 - 90 Deg

G Interval: 1.0 Deg

Test System: Huipu CPM-1800B Goniophotometer

Humidity:

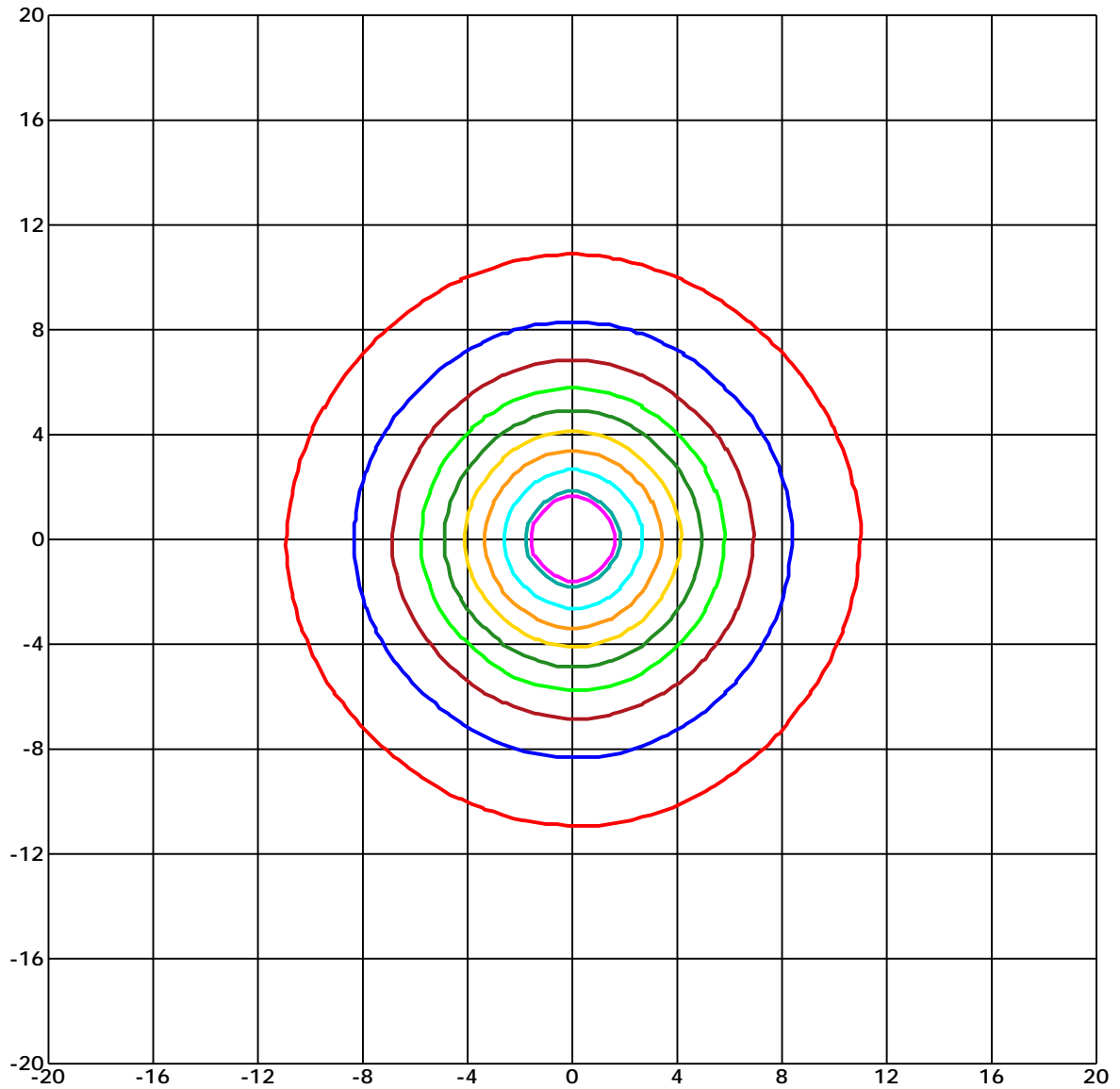
Test Distance: 5.95 m

Remarks:

Report No.:

Test Time: 2020/1/9 17:28:25

### ISOLX DIAGRAM



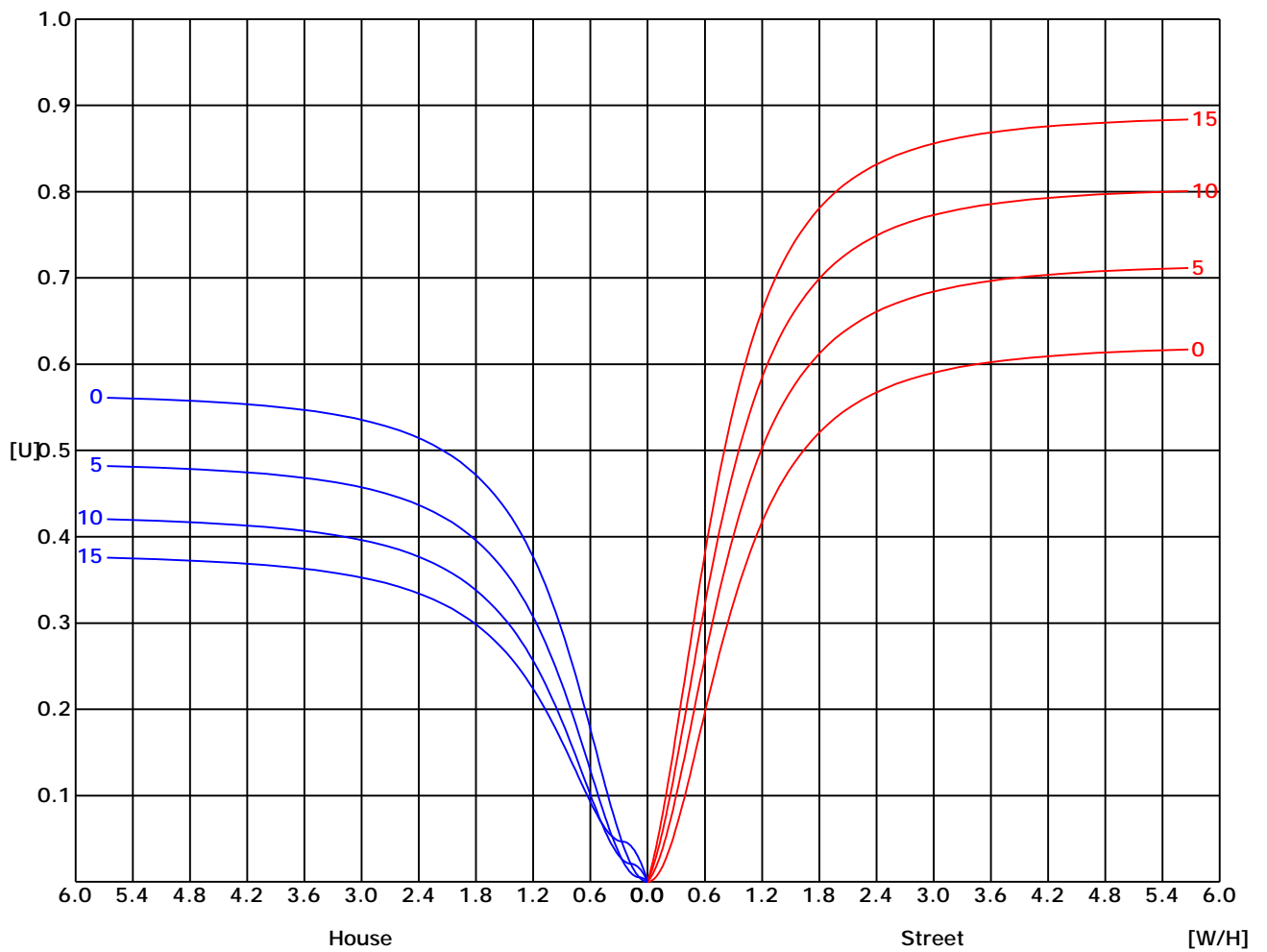
Unit of illumination: lx      Height of plane: 8.0(m)/26.25(ft)

- |                  |                  |
|------------------|------------------|
| — 26.299(1%Emax) | — 14.293(1%Emax) |
| — 25.727(1%Emax) | — 11.434(1%Emax) |
| — 22.868(1%Emax) | — 8.576(0%Emax)  |
| — 20.01(1%Emax)  | — 5.717(0%Emax)  |
| — 17.151(1%Emax) | — 2.859(0%Emax)  |

C Range: 0 - 360 Deg  
C Interval: 45.0 Deg  
Test Speed: High  
Temperature:  
Operators:  
Test Date: 2020/1/9 17:28:25

G Range: 0 - 90 Deg  
G Interval: 1.0 Deg  
Test System: Huipu CPM-1800B Goniophotometer  
Humidity:  
Test Distance: 5.95 m  
Remarks:

## UTILIZATION FACTOR DIAGRAM (ROAD)



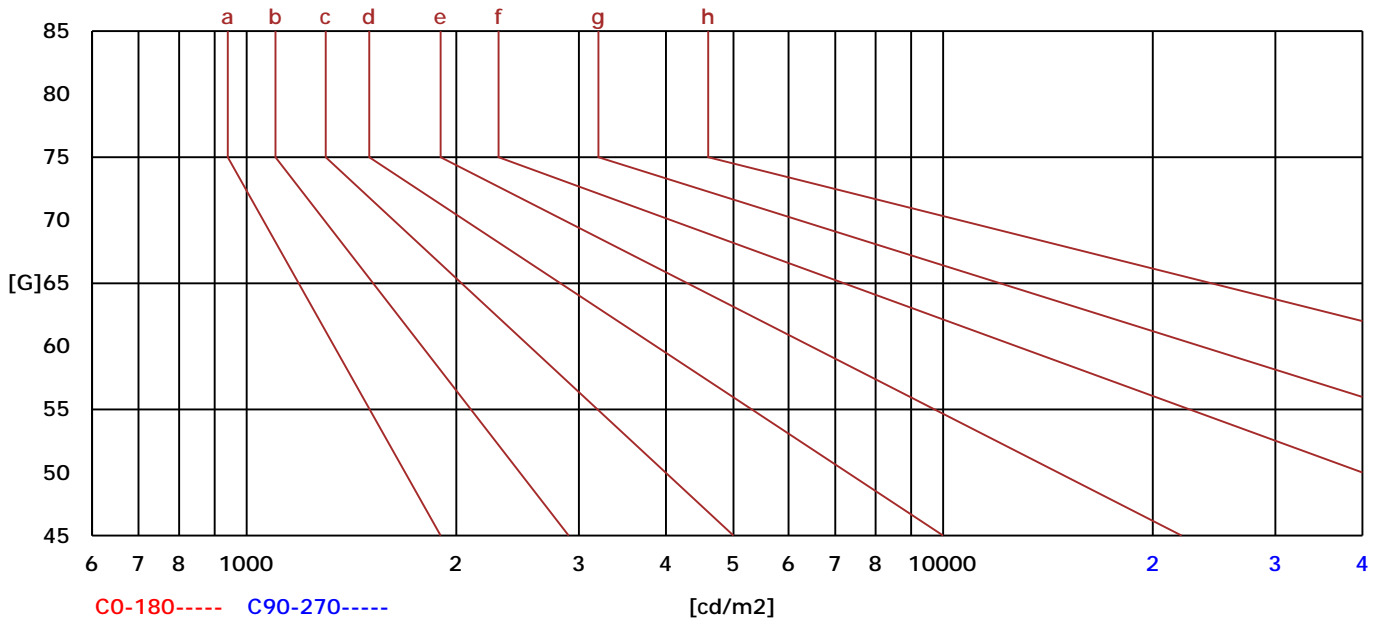
C Range: 0 - 360 Deg  
 C Interval: 45.0 Deg  
 Test Speed: High  
 Temperature:  
 Operators:  
 Test Date: 2020/1/9 17:28:25

G Range: 0 - 90 Deg  
 G Interval: 1.0 Deg  
 Test System: Huipu CPM-1800B Goniophotometer  
 Humidity:  
 Test Distance: 5.95 m  
 Remarks:



### BRIGHT LIMIT DIAGRAM

C/G	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0
Dazzle	Quality	Illuminance	---	---	---	---	---	---	---
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
---	---	a	b	c	d	e	f	g	h



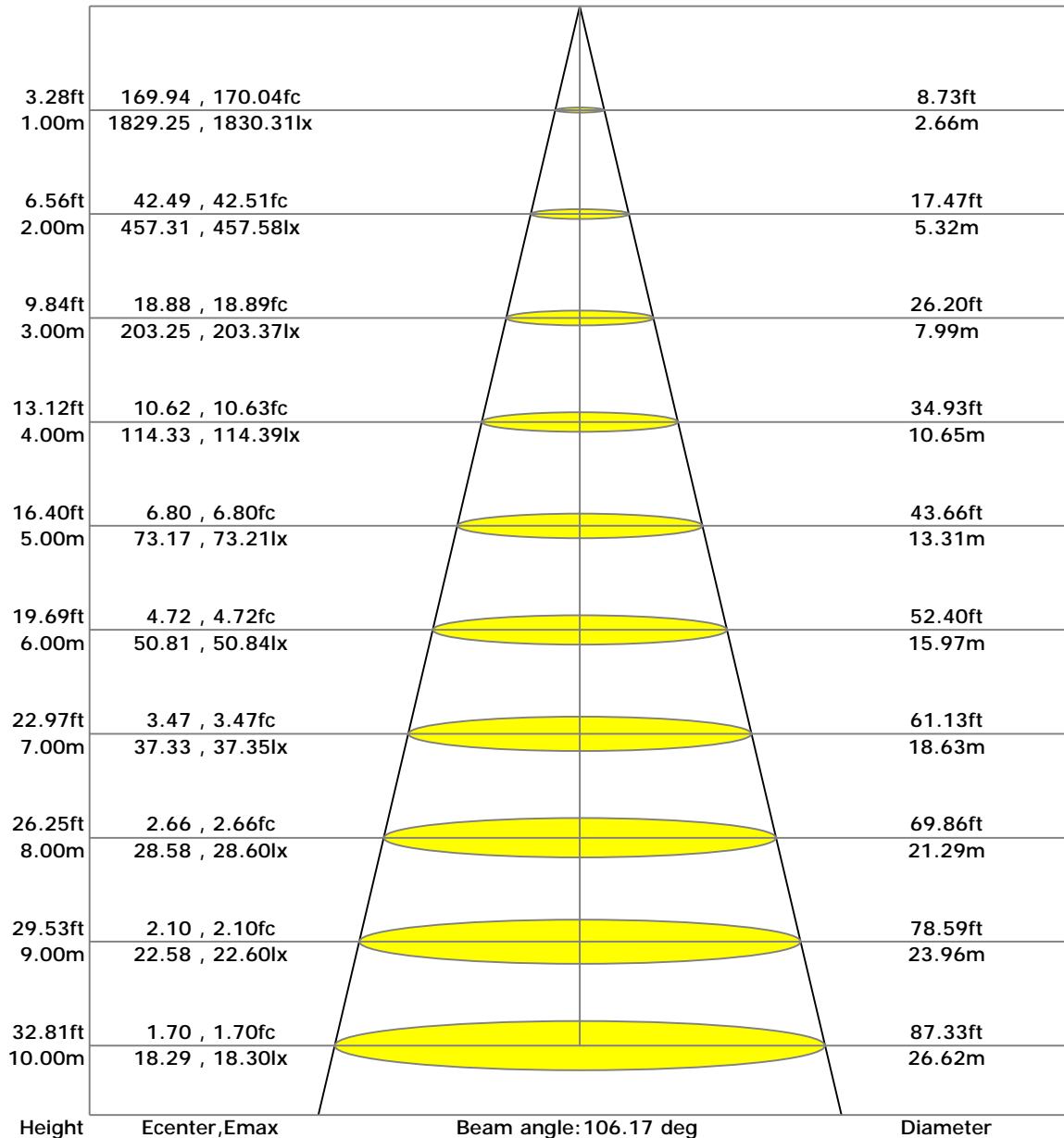
C Range: 0 - 360 Deg  
 C Interval: 45.0 Deg  
 Test Speed: High  
 Temperature:  
 Operators:  
 Test Date: 2020/1/9 17:28:25

G Range: 0 - 90 Deg  
 G Interval: 1.0 Deg  
 Test System: Huipu CPM-1800B Goniophotometer  
 Humidity:  
 Test Distance: 5.95 m  
 Remarks:

Report No.:

Test Time: 2020/1/9 17:28:25

### LX-DISTANCE DIAGRAM



C Range: 0 - 360 Deg

C Interval: 45.0 Deg

Test Speed: High

Temperature:

Operators:

Test Date: 2020/1/9 17:28:25

G Range: 0 - 90 Deg

G Interval: 1.0 Deg

Test System: Huipu CPM-1800B Goniophotometer

Humidity:

Test Distance: 5.95 m

Remarks:

Report No.:

Test Time: 2020/1/9 17:28:25

## UGR(Unified Glare Rating) TABLE

RHOCC		80	80	70	70	70	50	50	50	30	30
RHOW		50	30	10	50	30	10	50	30	10	50
RHOF		20	20	20	20	20	20	20	20	20	20
Room Size X Y		Weft to light axis direction of observation					Direction of light axis parallel observation				
2H	2H	19.37	19.10	18.89	19.11	18.80	18.55	18.41	18.08	17.78	17.51
	3H	17.33	16.96	16.70	17.15	16.71	16.37	16.63	16.11	15.68	15.92
	4H	15.53	15.13	14.85	15.43	14.92	14.55	15.06	14.42	13.92	14.52
	6H	14.00	13.58	13.30	13.94	13.40	13.03	13.69	12.99	12.46	13.29
	8H	12.69	12.27	12.01	12.68	12.13	11.75	12.52	11.78	11.24	12.23
	12H	11.58	11.17	10.92	11.60	11.05	10.69	11.51	10.76	10.22	11.31
4H	2H	10.64	10.24	10.00	10.67	10.13	9.79	10.64	9.88	9.36	10.50
	3H	9.83	9.45	9.22	9.88	9.35	9.02	9.89	9.14	8.62	9.80
	4H	9.13	8.77	8.54	9.19	8.68	8.36	9.23	8.49	8.00	9.18
	6H	8.52	8.18	7.97	8.59	8.10	7.80	8.65	7.93	7.46	8.63
	8H	7.99	7.66	7.46	8.06	7.59	7.30	8.14	7.44	6.99	8.14
	12H	7.53	7.21	7.02	7.60	7.15	6.87	7.69	7.01	6.57	7.71
8H	4H	7.12	6.81	6.63	7.19	6.76	6.49	7.28	6.63	6.21	7.32
	6H	6.75	6.46	6.29	6.82	6.41	6.16	6.92	6.29	5.89	6.97
	8H	6.43	6.15	5.98	6.50	6.10	5.86	6.60	5.99	5.60	6.65
	12H	6.14	5.87	5.71	6.20	5.82	5.59	6.31	5.72	5.35	6.36
12H	4H	5.87	5.61	5.46	5.94	5.57	5.35	6.04	5.47	5.12	6.10
	6H	5.64	5.39	5.24	5.70	5.34	5.13	5.80	5.25	4.91	5.86

C Range: 0 - 360 Deg

C Interval: 45.0 Deg

Test Speed: High

Temperature:

Operators:

Test Date: 2020/1/9 17:28:25

G Range: 0 - 90 Deg

G Interval: 1.0 Deg

Test System: Huipu CPM-1800B Goniophotometer

Humidity:

Test Distance: 5.95 m

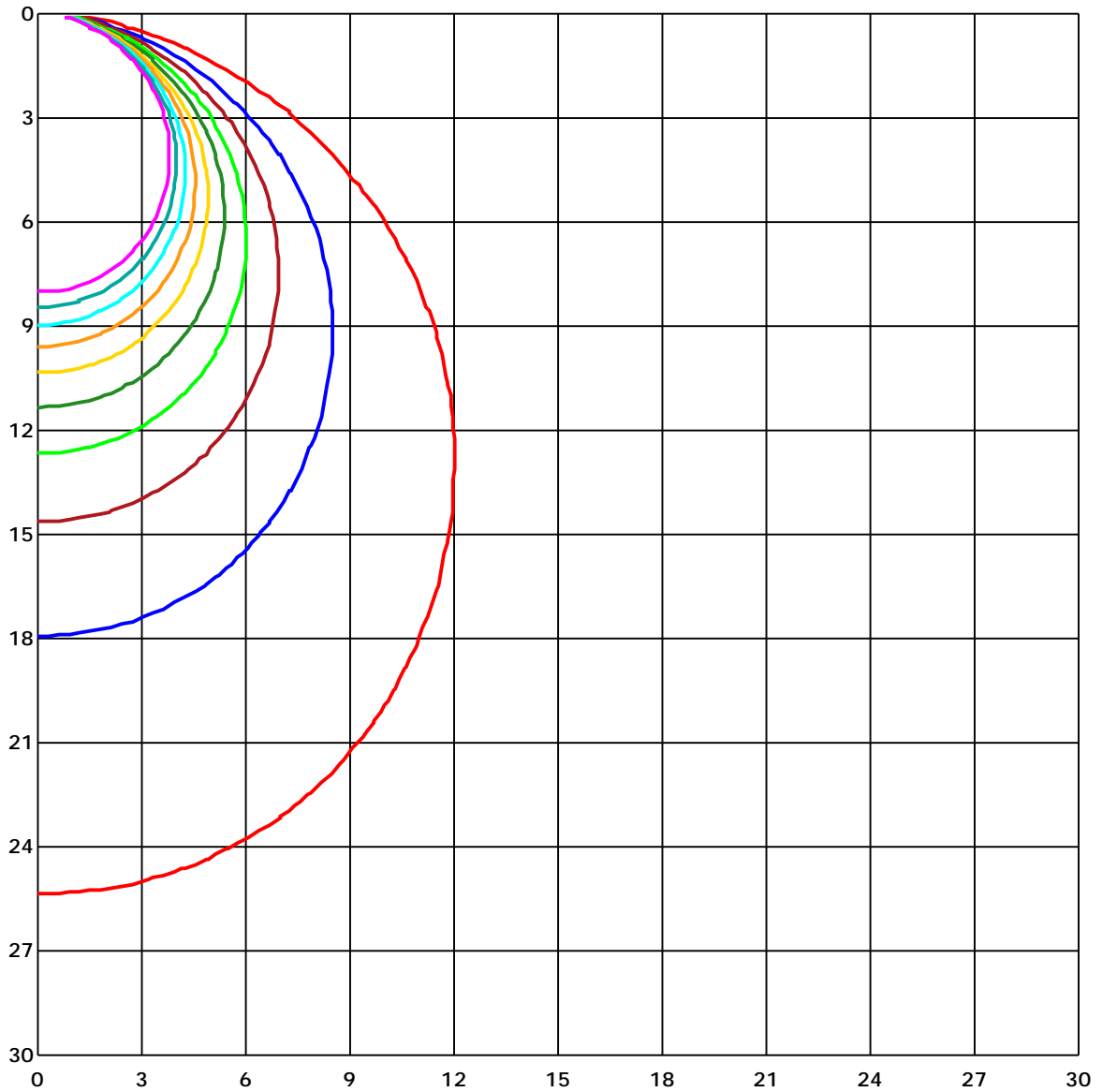
Remarks:



Report No.:

Test Time: 2020/1/9 17:28:25

### SPACE ISOLX DIAGRAM



Unit of illumination: lx

- |          |          |
|----------|----------|
| — 28.488 | — 14.244 |
| — 25.639 | — 11.395 |
| — 22.79  | — 8.546  |
| — 19.941 | — 5.698  |
| — 17.093 | — 2.849  |

C Range: 0 - 360 Deg

C Interval: 45.0 Deg

Test Speed: High

Temperature:

Operators:

Test Date: 2020/1/9 17:28:25

G Range: 0 - 90 Deg

G Interval: 1.0 Deg

Test System: Huipu CPM-1800B Goniophotometer

Humidity:

Test Distance: 5.95 m

Remarks:

Report No.:

Test Time: 2020/1/9 17:28:25

## LUMINOUS DISTRIBUTION INTENSITY DATA

Gamma\C	C0	C45	C90	C135	C180	C225	C270	C315	C360	
G0	1829.25	1828.54	1828.19	1826.77	1827.12	1824.29	1824.29	1823.94	1821.81	
G1	1830.31	1828.54	1828.89	1825.71	1827.48	1823.94	1824.29	1822.88	1822.88	
G2	1829.96	1826.77	1828.54	1824.65	1827.12	1820.75	1825.0	1822.17	1822.88	
G3	1829.25	1825.35	1827.48	1821.1	1826.42	1816.5	1823.94	1820.04	1822.17	
G4	1828.54	1821.46	1825.0	1819.33	1823.23	1815.09	1821.81	1817.92	1821.81	
G5	1825.35	1816.5	1822.88	1814.38	1819.69	1809.07	1820.04	1813.67	1819.33	
G6	1823.94	1813.32	1818.98	1808.01	1817.56	1804.82	1815.44	1810.48	1815.09	
G7	1818.98	1806.94	1816.15	1804.11	1811.55	1797.39	1810.13	1804.82	1812.96	
G8	1812.96	1803.05	1809.78	1797.39	1808.71	1792.78	1806.94	1798.09	1806.94	
G9	1809.42	1793.84	1802.34	1788.18	1800.93	1783.22	1798.8	1793.14	1800.22	
G10	1800.93	1784.29	1797.74	1782.52	1791.72	1772.25	1795.26	1783.93	1795.97	
G11	1797.39	1778.62	1788.89	1771.9	1786.41	1766.59	1786.06	1778.62	1787.47	
G12	1787.47	1766.59	1777.56	1759.86	1776.14	1753.84	1775.79	1766.94	1777.21	
G13	1776.5	1759.15	1771.9	1751.72	1764.11	1747.82	1769.42	1754.9	1772.25	
G14	1770.48	1746.05	1760.57	1737.91	1758.09	1732.24	1757.03	1748.53	1759.86	
G15	1758.44	1731.54	1752.78	1721.98	1743.57	1717.02	1749.95	1733.31	1746.41	
G16	1750.3	1723.39	1739.33	1714.54	1729.06	1708.88	1735.78	1717.38	1739.33	
G17	1735.43	1706.75	1723.75	1698.26	1721.62	1691.53	1720.56	1710.65	1724.46	
G18	1728.0	1689.41	1715.96	1680.56	1704.98	1682.68	1712.07	1692.95	1717.38	
G19	1712.07	1680.56	1699.32	1671.0	1686.93	1664.27	1695.78	1675.25	1701.09	
G20	1695.07	1661.44	1690.12	1651.53	1678.43	1645.15	1686.93	1666.4	1691.53	
G21	1686.22	1640.91	1671.35	1641.61	1659.67	1634.18	1668.87	1646.22	1673.83	
G22	1667.1	1630.64	1652.23	1620.37	1638.78	1613.29	1649.4	1626.04	1655.42	
G23	1647.28	1609.04	1641.97	1610.11	1629.58	1601.96	1639.14	1615.77	1645.15	
G24	1637.37	1585.32	1621.43	1587.45	1607.63	1579.31	1618.6	1593.47	1624.62	
G25	1615.06	1573.64	1609.75	1564.08	1596.65	1555.94	1596.65	1570.81	1614.35	
G26	1592.4	1549.92	1587.09	1552.05	1573.29	1531.51	1585.32	1558.77	1591.34	
G27	1580.72	1525.49	1575.41	1527.62	1550.28	1518.77	1561.96	1534.7	1568.33	
G28	1557.71	1512.4	1550.63	1515.58	1538.59	1493.63	1537.18	1522.31	1556.29	
G29	1532.93	1487.26	1525.85	1489.38	1513.1	1480.53	1525.49	1496.82	1531.87	
G30	1520.18	1473.1	1513.1	1462.48	1498.59	1453.98	1499.3	1470.27	1519.83	
G31	1494.34	1446.55	1486.2	1449.73	1474.51	1427.08	1473.1	1457.17	1495.05	
G32	1467.79	1430.62	1459.29	1420.35	1461.42	1413.62	1460.0	1428.49	1481.59	
G33	1453.98	1404.06	1445.13	1407.96	1434.51	1383.53	1431.68	1414.68	1452.92	
G34	1424.95	1372.91	1415.04	1377.16	1404.42	1354.5	1419.29	1386.01	1426.37	
G35	1410.79	1357.69	1385.65	1362.64	1390.26	1339.63	1388.84	1371.14	1411.14	
G36	1382.47	1327.59	1370.79	1332.2	1361.93	1310.25	1359.1	1342.11	1383.18	

C Range: 0 - 360 Deg

C Interval: 45.0 Deg

Test Speed: High

Temperature:

Operators:

Test Date: 2020/1/9 17:28:25

G Range: 0 - 90 Deg

G Interval: 1.0 Deg

Test System: Huipu CPM-1800B Goniophotometer

Humidity:

Test Distance: 5.95 m

Remarks:

Report No.:

Test Time: 2020/1/9 17:28:25

## LUMINOUS DISTRIBUTION INTENSITY DATA(Continue 1)

Gamma\C	C0	C45	C90	C135	C180	C225	C270	C315	C360	
G37	1352.38	1312.37	1339.98	1301.4	1346.71	1296.44	1343.53	1312.37	1353.79	
G38	1336.8	1280.51	1307.77	1286.17	1316.97	1263.87	1313.08	1296.79	1338.57	
G39	1306.35	1248.29	1292.19	1254.31	1301.4	1232.01	1297.86	1265.64	1308.12	
G40	1291.13	1232.01	1259.98	1222.45	1269.89	1216.08	1266.35	1250.06	1277.68	
G41	1259.98	1199.44	1227.41	1205.81	1239.09	1184.21	1234.84	1218.55	1262.45	
G42	1228.11	1182.8	1211.47	1172.53	1223.86	1167.93	1218.91	1186.34	1230.95	
G43	1211.83	1148.46	1177.84	1139.25	1192.0	1135.0	1186.34	1169.34	1198.02	
G44	1179.61	1132.17	1160.85	1123.32	1159.43	1101.37	1169.7	1136.42	1182.09	
G45	1162.97	1097.83	1126.86	1088.63	1143.5	1084.73	1136.42	1119.43	1148.81	
G46	1129.34	1062.43	1091.81	1053.58	1109.87	1050.39	1102.43	1085.44	1115.53	
G47	1112.35	1044.73	1074.47	1036.23	1076.59	1033.4	1085.44	1050.75	1098.19	
G48	1078.01	1008.97	1038.71	1000.48	1058.89	998.35	1051.1	1033.4	1064.91	
G49	1041.19	972.51	1021.01	964.72	1025.61	962.95	1033.4	997.64	1047.21	
G50	1025.61	954.45	984.9	947.02	990.92	945.95	998.0	962.59	1012.16	
G51	990.56	917.99	948.08	908.78	973.57	907.72	980.65	924.36	976.75	
G52	972.15	879.04	930.02	890.73	936.4	890.02	942.77	906.66	959.05	
G53	935.33	860.63	891.43	854.26	901.7	853.91	907.37	870.19	921.17	
G54	898.87	788.41	873.03	788.06	884.0	835.85	889.31	851.78	903.83	
G55	881.17	786.29	836.56	788.06	848.24	786.64	853.55	788.77	867.72	
G56	844.0	767.88	817.44	763.28	830.19	764.34	817.09	779.56	830.54	
G57	807.89	730.0	780.63	744.87	794.43	746.28	799.03	761.15	812.84	
G58	789.12	692.12	743.1	707.7	758.32	710.17	762.57	723.98	775.67	
G59	752.3	673.71	724.34	670.52	740.27	673.36	726.46	687.16	757.61	
G60	734.25	635.47	687.52	651.76	703.8	636.89	708.05	668.75	720.44	
G61	696.72	616.71	669.11	614.59	686.1	618.48	671.59	631.58	702.39	
G62	658.84	578.83	630.52	595.82	648.93	582.02	634.06	612.82	664.5	
G63	622.02	541.3	593.35	559.01	612.82	563.96	616.36	575.64	627.69	
G64	602.9	522.54	574.23	540.24	594.41	527.85	579.18	557.24	608.92	
G65	566.44	485.72	538.12	503.78	558.65	492.09	543.43	520.77	572.46	
G66	529.27	466.96	502.01	466.96	540.6	474.04	525.02	484.31	553.7	
G67	511.21	430.49	483.95	449.26	504.49	438.99	489.26	465.9	516.88	
G68	474.04	394.03	475.1	413.15	486.78	403.59	473.33	429.79	479.7	
G69	474.04	376.33	414.92	395.45	473.33	384.12	437.93	409.96	473.69	
G70	420.94	338.31	397.57	357.92	417.04	349.49	403.23	374.2	425.18	
G71	383.41	320.92	363.94	323.61	397.57	332.68	384.47	339.26	390.14	
G72	366.06	286.34	328.04	306.44	363.23	298.66	350.8	321.67	372.08	
G73	331.01	269.38	311.44	273.2	346.27	266.09	334.31	287.57	337.49	

C Range: 0 - 360 Deg

C Interval: 45.0 Deg

Test Speed: High

Temperature:

Operators:

Test Date: 2020/1/9 17:28:25

G Range: 0 - 90 Deg

G Interval: 1.0 Deg

Test System: Huipu CPM-1800B Goniophotometer

Humidity:

Test Distance: 5.95 m

Remarks:

