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Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,Ching

Nata

LumCAT: 1-0936-N
Luminaire: 92.70.361.000
Report No: 220516-B016
Test No: 220516-C016
LampCAT: CREE CXA1516
Lamp flux(lm): 1745.8
Number of Lamps: 1
Length(mm): 43
Phm Type: C

Voltage(V): 35.2800
Current(A): 0.3600
Power (W): 12.7000
PF: 0.0000
Ballast type: DC
Width(mm): 43
Height(mm): 0

Photometric Results

Lumens(lm): 1446.08
Efficiency(%): 82.83%
Lumens(lm)/Power(W): 113.86
Central intensity(cd): 6282.569
Maximum intensity(cd): 6282.569
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=23.3
[C90/270]Total=23.3
Field angle(10%Imax): [C0/180]Total=49.7
[C90/270]Total=49.7
Maximum s/h(1/2): C0_180=0.39 C90_270=0.39
Maximum s/h(1/4): C0_180=0.42 C90_270=0.42
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 82.83%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.149%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	6282.569	0.000	0	.000%	.000%
1.0	6252.842	5.998	5.998	.344%	.415%
2.0	6138.864	17.786	23.784	1.019%	1.645%
3.0	5962.294	28.942	52.726	1.658%	3.646%
4.0	5751.217	39.209	91.935	2.246%	6.358%
5.0	5461.266	48.236	140.17	2.763%	9.693%
6.0	5151.746	55.774	195.944	3.195%	13.550%
7.0	4819.295	61.890	257.834	3.545%	17.830%
8.0	4463.990	66.439	324.273	3.806%	22.424%
9.0	4093.970	69.358	393.631	3.973%	27.221%
10.0	3732.838	70.830	464.46	4.057%	32.119%
11.0	3365.283	70.925	535.385	4.063%	37.023%
12.0	3029.099	69.900	605.285	4.004%	41.857%
13.0	2694.034	67.919	673.204	3.890%	46.554%
14.0	2367.261	64.784	737.988	3.711%	51.034%
15.0	2108.232	61.442	799.43	3.519%	55.283%
16.0	1868.921	58.276	857.706	3.338%	59.313%
17.0	1641.188	54.662	912.368	3.131%	63.093%
18.0	1441.591	50.828	963.196	2.911%	66.608%
19.0	1302.165	47.736	1010.932	2.734%	69.909%
20.0	1138.674	44.674	1055.606	2.559%	72.998%
21.0	1024.060	41.529	1097.135	2.379%	75.870%
22.0	921.666	39.100	1136.235	2.240%	78.574%
23.0	815.754	36.456	1172.691	2.088%	81.095%
24.0	710.395	33.367	1206.058	1.911%	83.402%
25.0	611.108	30.048	1236.106	1.721%	85.480%
26.0	512.732	26.528	1262.635	1.520%	87.315%
27.0	418.689	22.787	1285.422	1.305%	88.890%
28.0	338.844	19.179	1304.601	1.099%	90.217%
29.0	258.655	15.632	1320.233	.895%	91.298%
30.0	201.681	12.429	1332.662	.712%	92.157%
31.0	143.736	9.612	1342.275	.551%	92.822%
32.0	103.305	7.077	1349.352	.405%	93.311%
33.0	80.547	5.416	1354.769	.310%	93.686%
34.0	68.021	4.496	1359.265	.258%	93.997%
35.0	61.665	4.028	1363.292	.231%	94.275%
36.0	57.363	3.790	1367.082	.217%	94.537%
37.0	54.323	3.643	1370.725	.209%	94.789%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	51.029	3.517	1374.241	.201%	95.033%
39.0	47.399	3.360	1377.601	.192%	95.265%
40.0	44.628	3.210	1380.81	.184%	95.487%
41.0	41.663	3.073	1383.883	.176%	95.699%
42.0	38.533	2.914	1386.797	.167%	95.901%
43.0	36.009	2.761	1389.558	.158%	96.092%
44.0	33.559	2.626	1392.184	.150%	96.273%
45.0	30.982	2.480	1394.664	.142%	96.445%
46.0	28.883	2.341	1397.005	.134%	96.607%
47.0	26.680	2.210	1399.215	.127%	96.760%
48.0	24.723	2.078	1401.293	.119%	96.903%
49.0	23.087	1.963	1403.257	.112%	97.039%
50.0	21.280	1.850	1405.106	.106%	97.167%
51.0	19.741	1.736	1406.842	.099%	97.287%
52.0	18.486	1.640	1408.482	.094%	97.400%
53.0	17.231	1.554	1410.036	.089%	97.508%
54.0	16.193	1.473	1411.509	.084%	97.610%
55.0	15.424	1.411	1412.92	.081%	97.707%
56.0	14.699	1.361	1414.282	.078%	97.801%
57.0	14.012	1.313	1415.594	.075%	97.892%
58.0	13.489	1.272	1416.866	.073%	97.980%
59.0	13.011	1.239	1418.105	.071%	98.066%
60.0	12.548	1.208	1419.313	.069%	98.149%
61.0	12.130	1.178	1420.49	.067%	98.231%
62.0	11.809	1.153	1421.644	.066%	98.311%
63.0	11.465	1.132	1422.776	.065%	98.389%
64.0	11.159	1.110	1423.886	.064%	98.466%
65.0	10.875	1.090	1424.976	.062%	98.541%
66.0	10.576	1.070	1426.046	.061%	98.615%
67.0	10.285	1.049	1427.095	.060%	98.688%
68.0	10.016	1.028	1428.124	.059%	98.759%
69.0	9.740	1.008	1429.132	.058%	98.828%
70.0	9.516	0.989	1430.121	.057%	98.897%
71.0	9.262	0.971	1431.091	.056%	98.964%
72.0	8.985	0.949	1432.04	.054%	99.029%
73.0	8.731	0.926	1432.966	.053%	99.094%
74.0	8.507	0.906	1433.873	.052%	99.156%
75.0	8.276	0.887	1434.759	.051%	99.217%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	8.059	0.867	1435.627	.050%	99.277%
77.0	7.850	0.848	1436.475	.049%	99.336%
78.0	7.626	0.828	1437.303	.047%	99.393%
79.0	7.439	0.809	1438.113	.046%	99.449%
80.0	7.253	0.792	1438.905	.045%	99.504%
81.0	7.103	0.776	1439.681	.044%	99.558%
82.0	6.976	0.763	1440.445	.044%	99.611%
83.0	6.842	0.751	1441.196	.043%	99.663%
84.0	6.722	0.739	1441.935	.042%	99.714%
85.0	6.603	0.727	1442.662	.042%	99.764%
86.0	6.438	0.713	1443.375	.041%	99.813%
87.0	6.274	0.696	1444.07	.040%	99.861%
88.0	6.125	0.679	1444.75	.039%	99.908%
89.0	6.043	0.667	1445.417	.038%	99.954%
90.0	5.968	0.659	1446.075	.038%	100.000%

Zonal flux distribution table

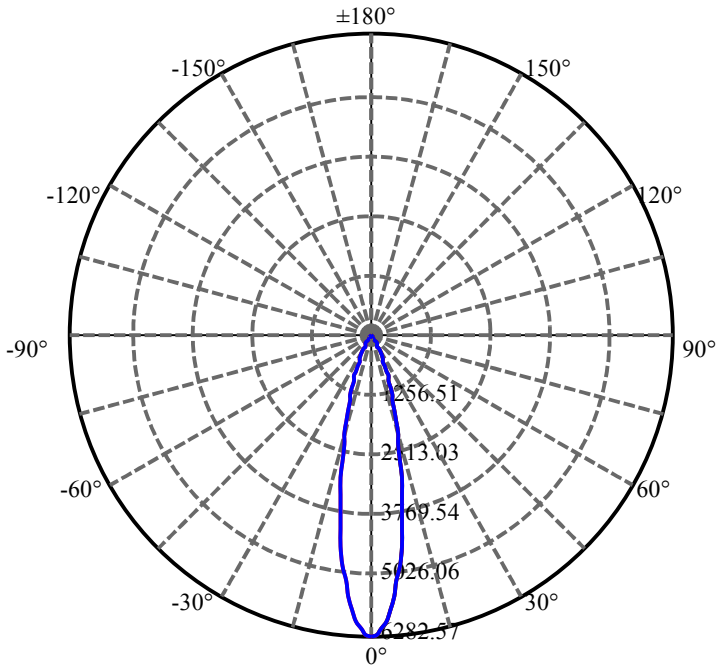
ZONAL LUMEN SUMMARY

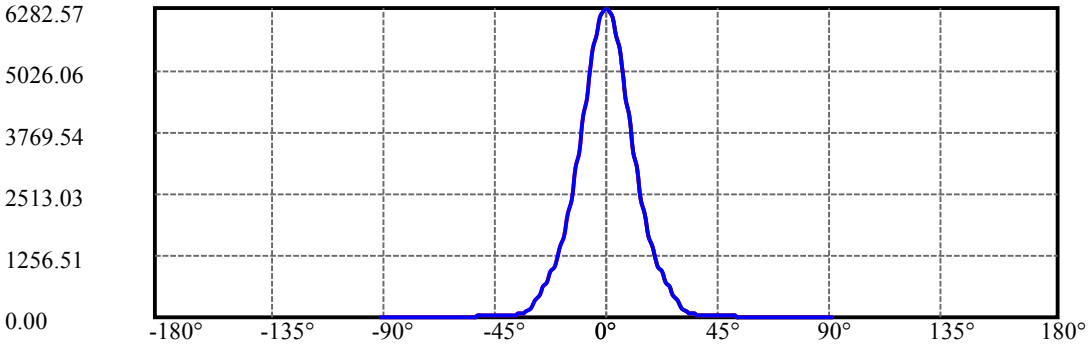
Zone	Lumens	%Lamp	%Fixt
0-30	1332.66	76.33%	92.16%
0-40	1380.81	79.09%	95.49%
0-60	1419.31	81.30%	98.15%
0-90	1445.42	82.79%	99.95%
0-120	1445.42	82.79%	99.95%
0-180	1446.08	82.83%	100.00%
60-90	27.31	1.56%	1.89%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-22.57	1156.86	66.26%	80.00%

ZONAL LUMEN SUMMARY

0-10	464.46
10-20	591.15
20-30	277.06
30-40	48.15
40-50	24.30
50-60	14.21
60-70	10.81
70-80	8.78
80-90	6.51
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

Light Distribution Curve [Unit:cd]





C0(Max):

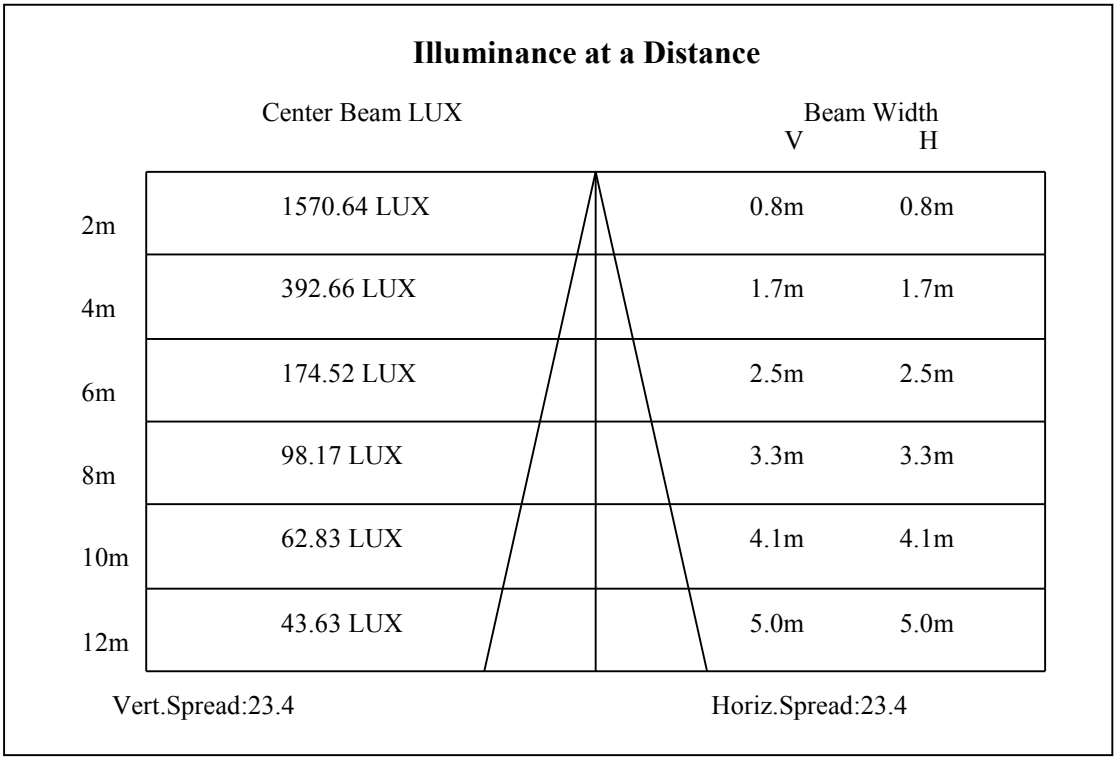
C0/C180:

C90/C270:

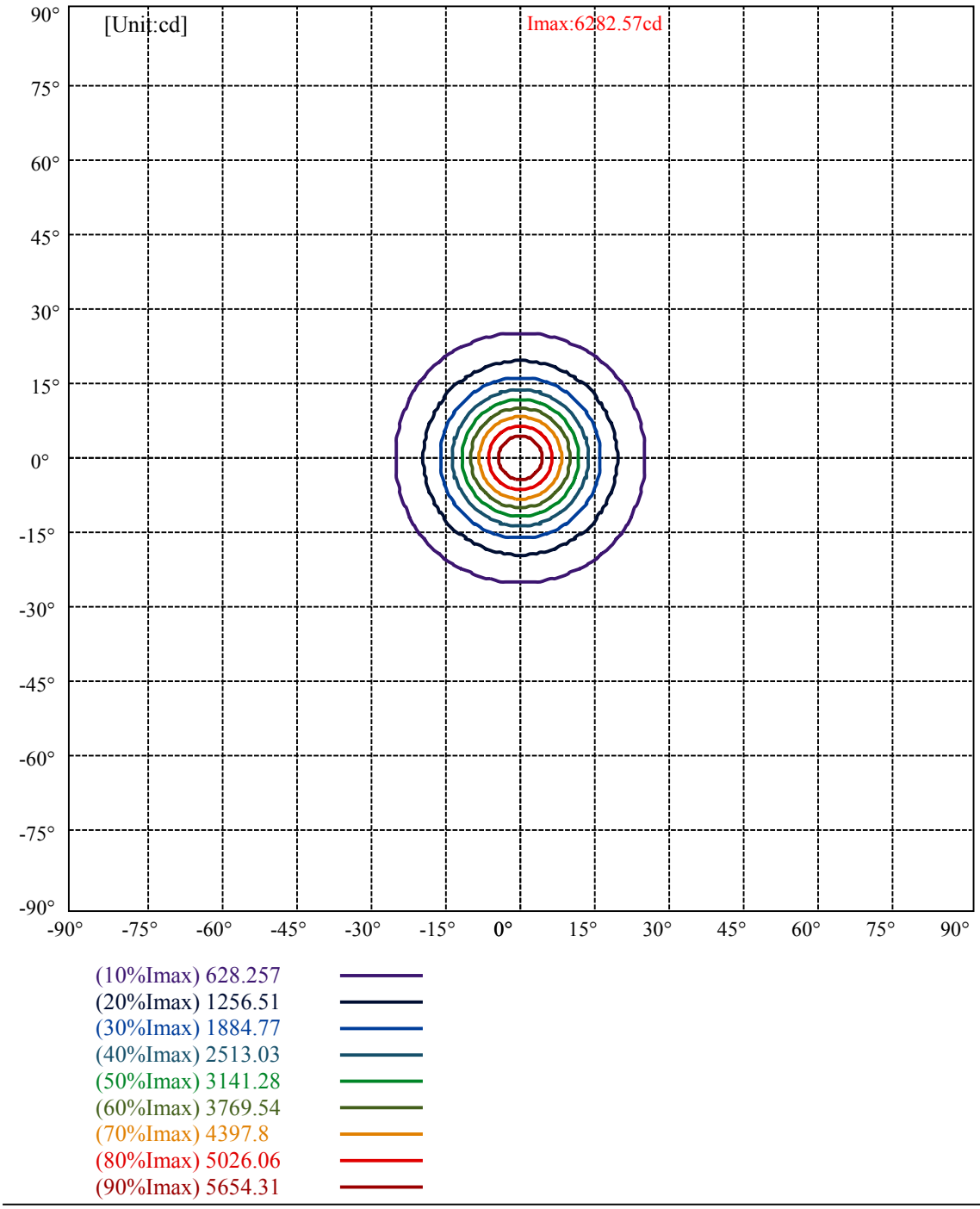
Field angle(10%Imax):C0/180Left:24.8 Right:24.8
:C90/270Left:24.8 Right:24.8

Beam Angle(50%Imax):C0/180Left:11.7 Right:11.7
:C90/270Left:11.7 Right:11.7

Lux distance Curve



ISO-Intensity(V-H)

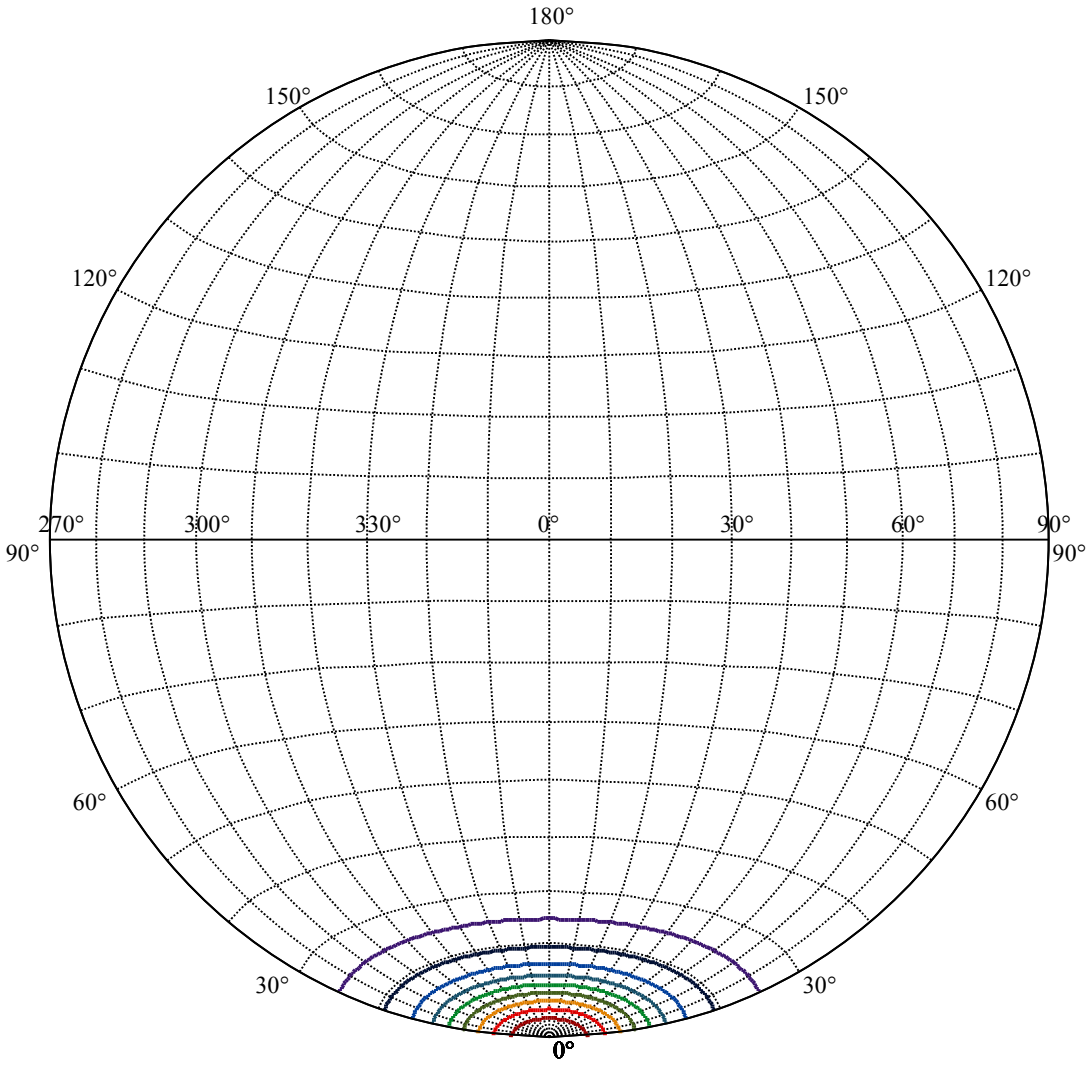


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2022/5/16
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.73

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:6282.57

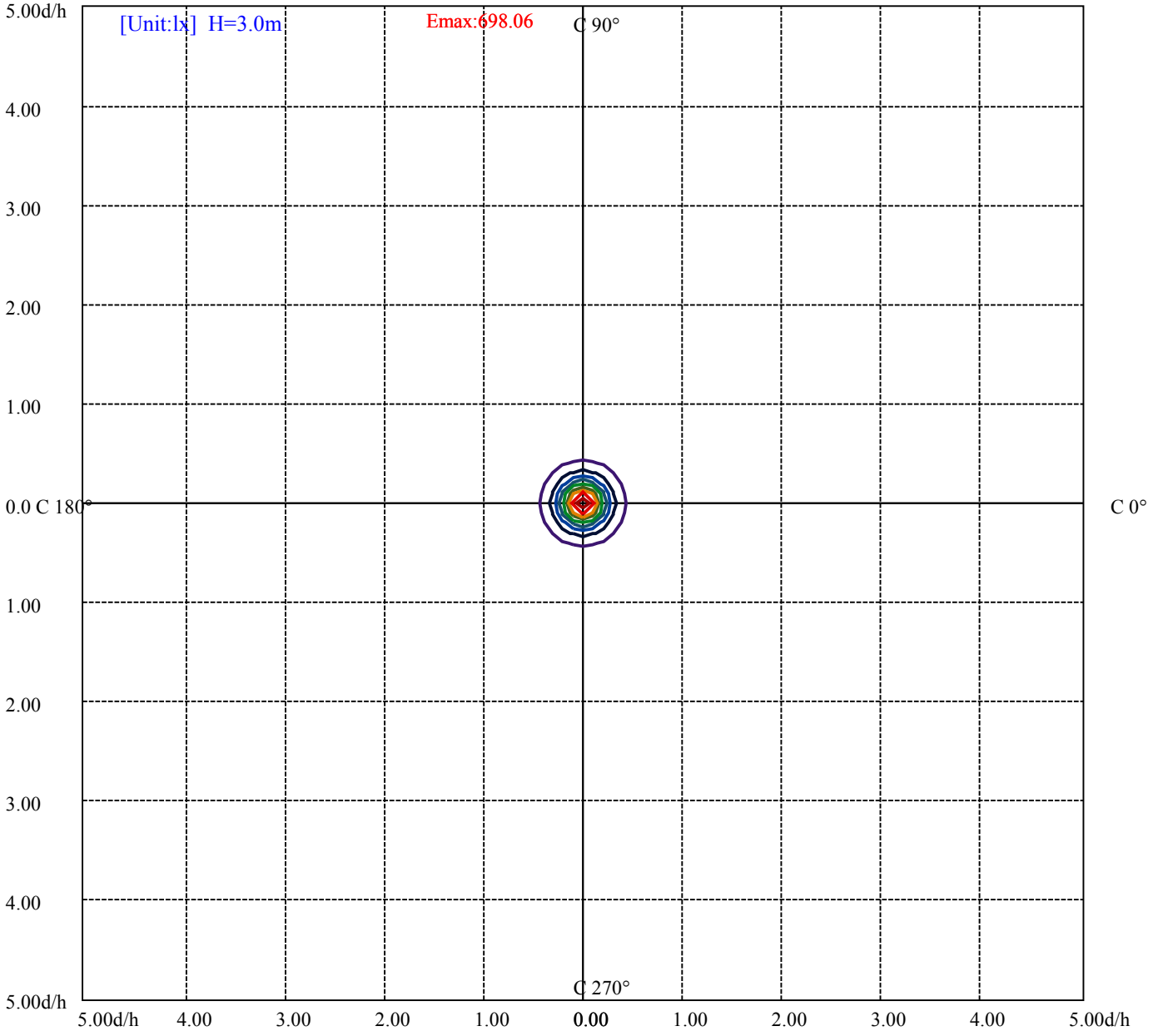
(10%Imax) 628.257
(20%Imax) 1256.51
(30%Imax) 1884.77
(40%Imax) 2513.03
(50%Imax) 3141.28
(60%Imax) 3769.54
(70%Imax) 4397.8
(80%Imax) 5026.06
(90%Imax) 5654.31

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2022/5/16
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.73

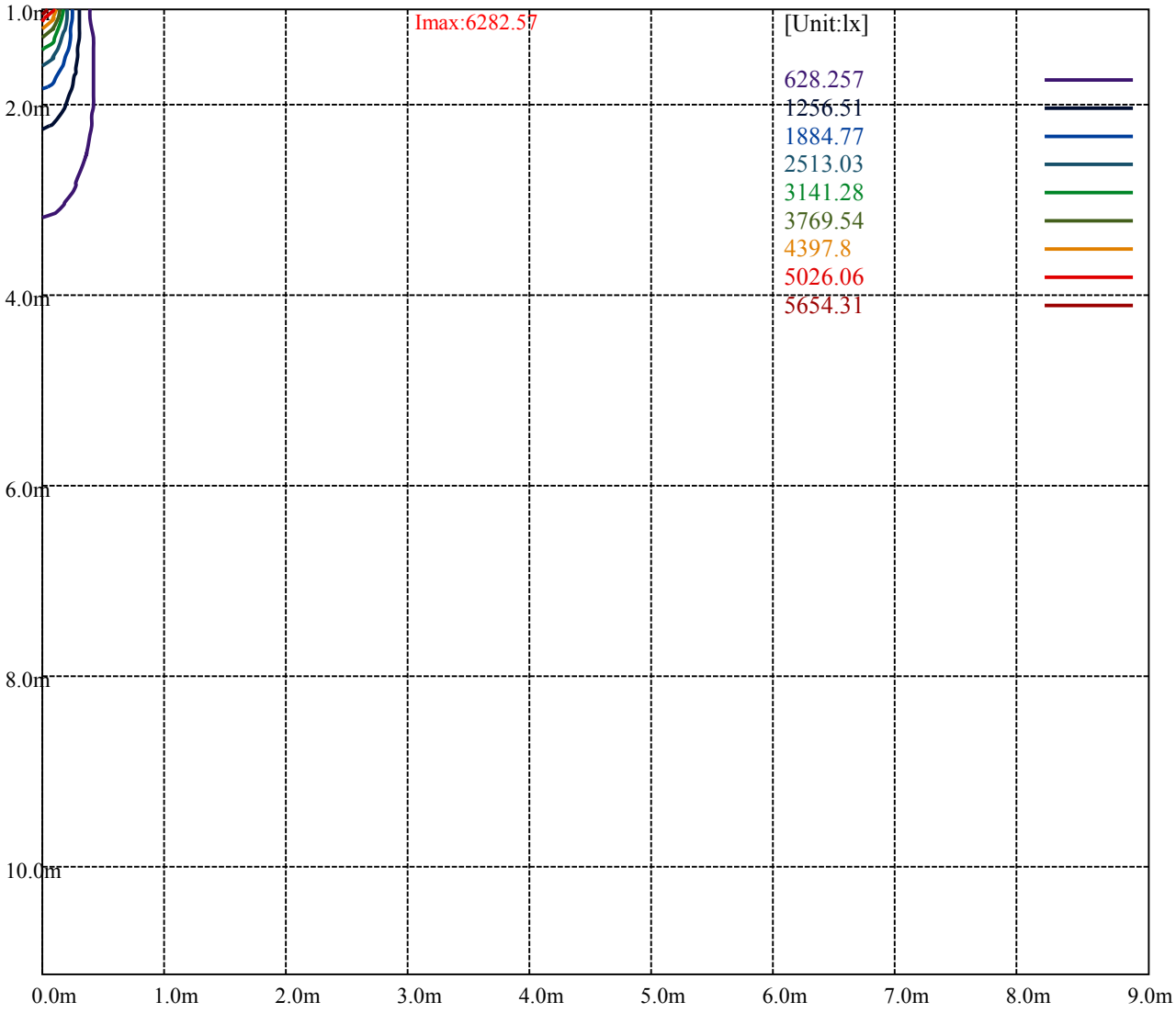
ISO illuminance diagram



(10%Emax) 69.80622
(20%Emax) 139.6122
(30%Emax) 209.4189
(40%Emax) 279.2256
(50%Emax) 349.0311
(60%Emax) 418.8378
(70%Emax) 488.6433
(80%Emax) 558.45
(90%Emax) 628.2567

Equipment: GMS1980
Temperature(°C): 25.0
Date: 2022/5/16
Humidity(%): 65.0%
Operator: NT07
Distance(m): 7.73

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2022/5/16
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.73

Luminance Limitting Curve(no luminous side)

Luminance Table

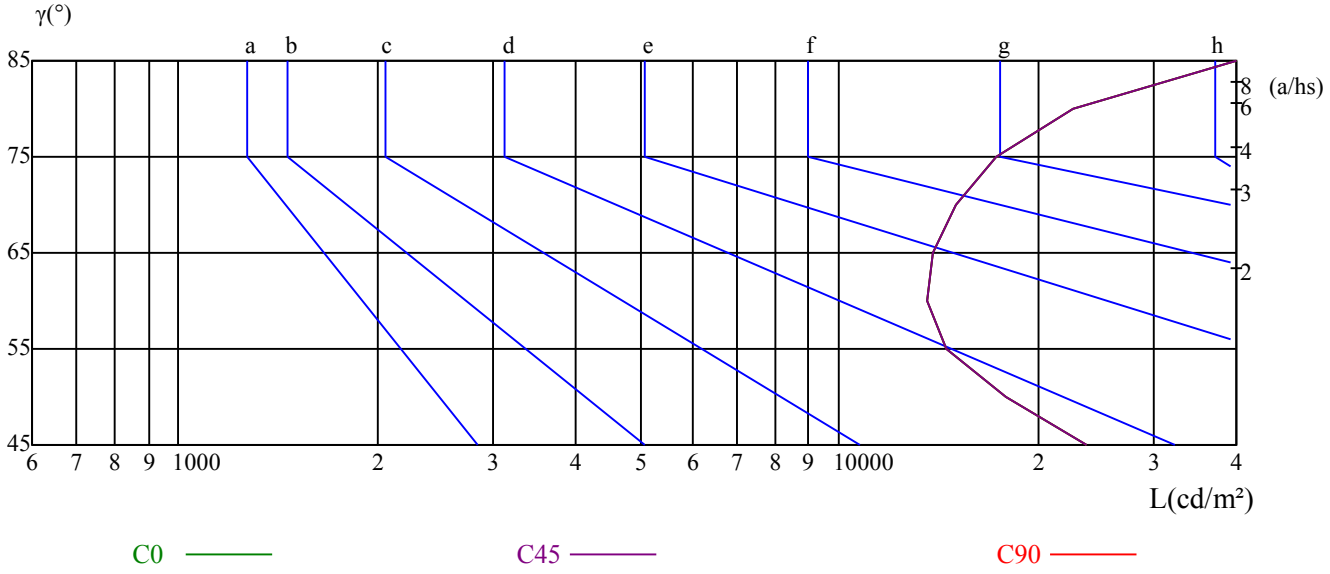
γ	45	50	55	60	65	70	75	80	85
C0	23697	17904	14543	13573	13917	15047	17293	22588	40972
C45	23697	17904	14543	13573	13917	15047	17293	22588	40972
C90	23697	17904	14543	13573	13917	15047	17293	22588	40972

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
13917	13917	13917	17293	17293	17293	40972	40972	40972

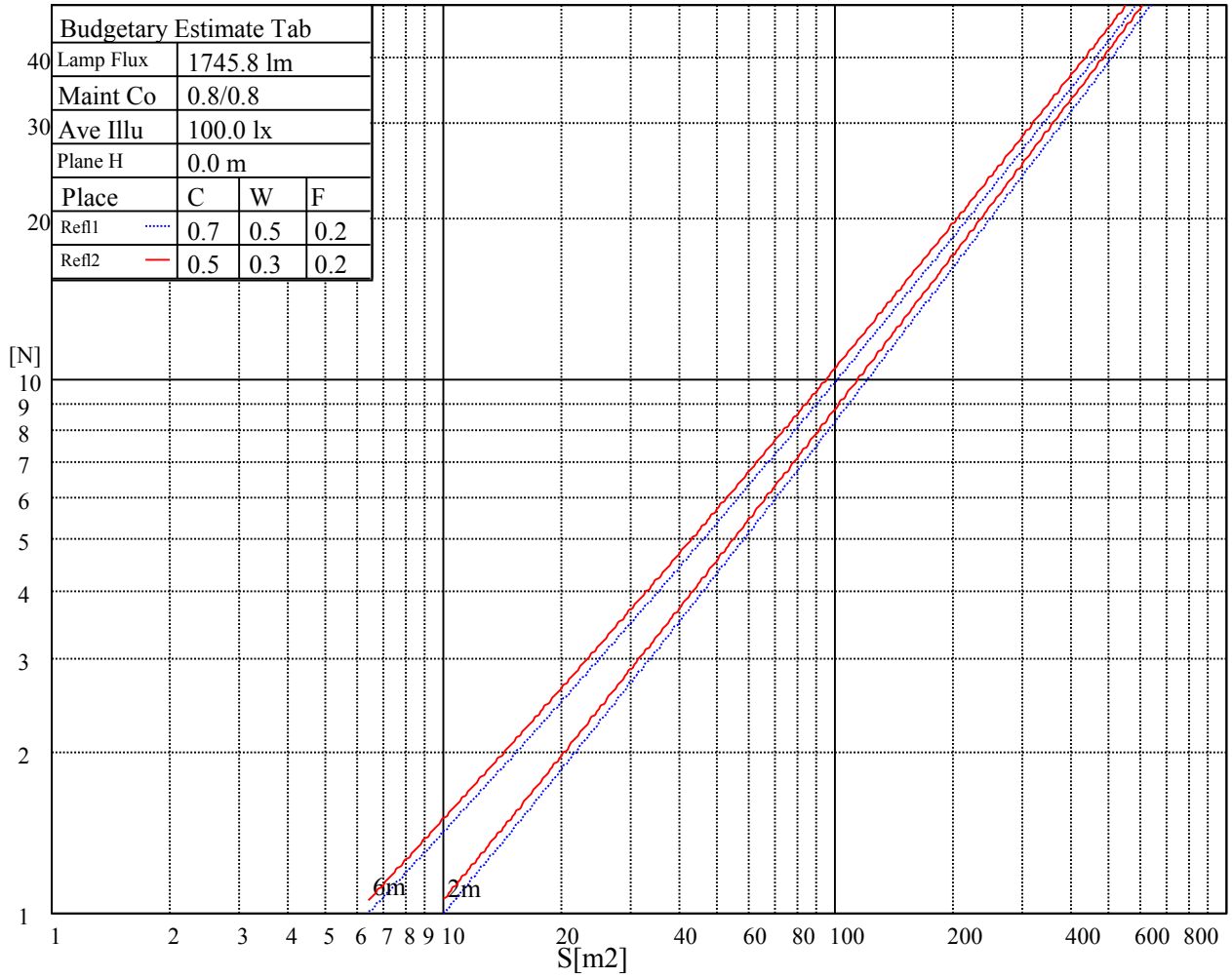
Glare Table

Glare	Quality	Service Values Illuminance(lx)							
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

Luminance Limitting Curve



Budgetary Estimate Table

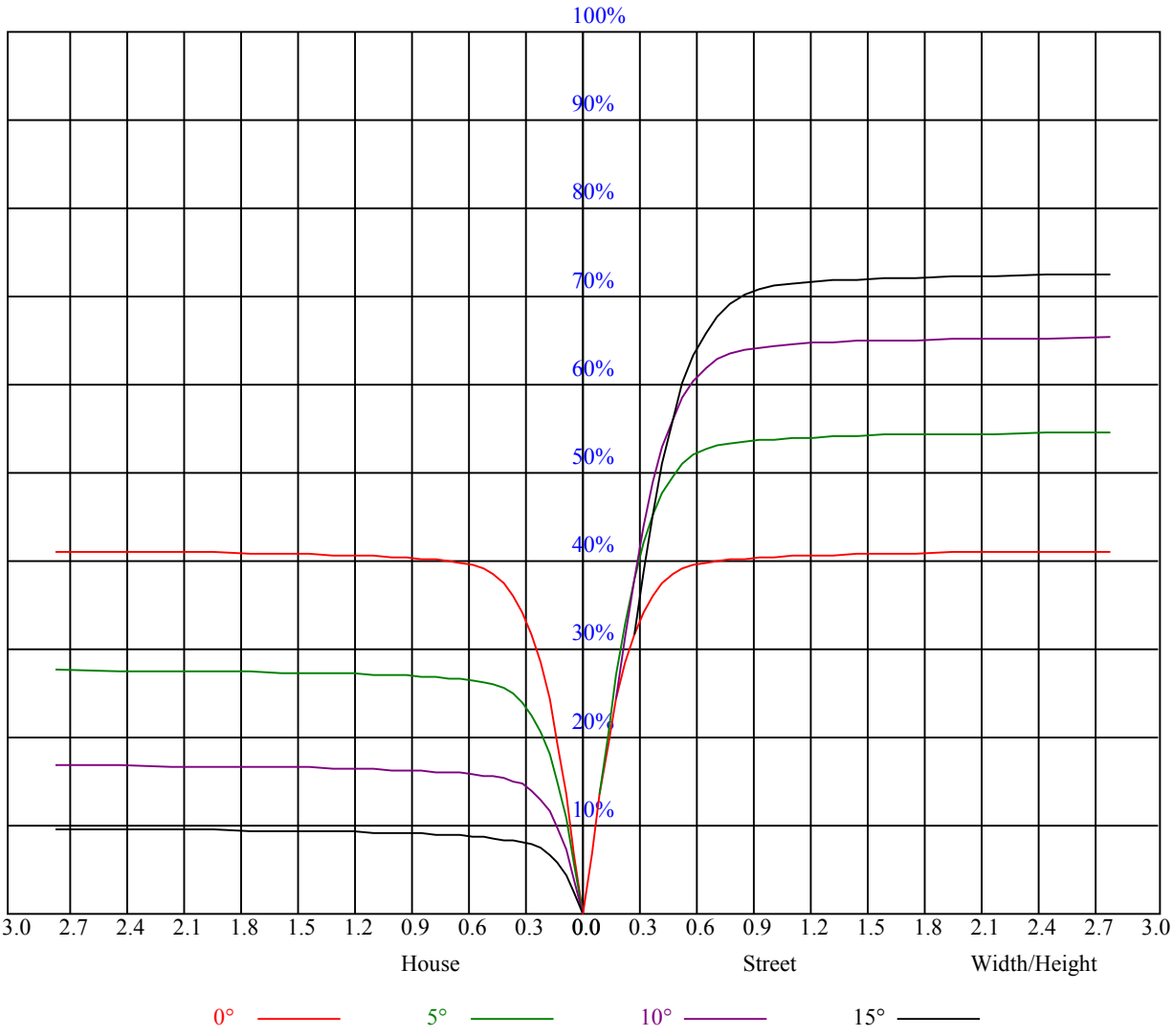


Equipment: GMS1980 Date: 2022/5/16 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.73

Utilization factor table for indoor luminaire

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	COEFFCIENTS OF UTILIZATION RHOFC=20 CU															
0	0.99	0.99	0.99	0.96	0.96	0.96	0.92	0.92	0.92	0.88	0.88	0.88	0.85	0.85	0.85	0.83
1	0.93	0.91	0.90	0.91	0.90	0.88	0.88	0.87	0.85	0.85	0.84	0.83	0.82	0.81	0.80	0.79
2	0.88	0.85	0.83	0.87	0.84	0.82	0.84	0.82	0.80	0.82	0.80	0.79	0.79	0.78	0.77	0.76
3	0.84	0.81	0.78	0.83	0.80	0.77	0.81	0.78	0.76	0.79	0.77	0.75	0.77	0.75	0.74	0.73
4	0.80	0.77	0.74	0.79	0.76	0.74	0.78	0.75	0.73	0.76	0.74	0.72	0.75	0.73	0.71	0.70
5	0.77	0.73	0.71	0.76	0.73	0.70	0.75	0.72	0.70	0.74	0.71	0.69	0.72	0.70	0.69	0.68
6	0.74	0.70	0.68	0.74	0.70	0.67	0.72	0.69	0.67	0.71	0.69	0.67	0.70	0.68	0.66	0.65
7	0.72	0.68	0.65	0.71	0.68	0.65	0.70	0.67	0.65	0.69	0.66	0.64	0.68	0.66	0.64	0.63
8	0.69	0.65	0.63	0.69	0.65	0.63	0.68	0.65	0.63	0.67	0.64	0.62	0.66	0.64	0.62	0.61
9	0.67	0.63	0.61	0.67	0.63	0.61	0.66	0.63	0.61	0.65	0.62	0.60	0.65	0.62	0.60	0.59
10	0.65	0.61	0.59	0.65	0.61	0.59	0.64	0.61	0.59	0.63	0.61	0.59	0.63	0.60	0.58	0.58

Coefficient Utilization Curve



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2022/5/16
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.73

Intensity data(cd)

C/γ(°)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
0.0	6241.19	6318.87	6301.54	6223.26	6068.50	5861.76	5582.12	5260.05	4946.94
45.0	6315.28	6257.92	6112.12	5928.09	5699.83	5359.84	5046.73	4719.88	4341.05
90.0	6272.26	6171.88	5991.42	5748.83	5493.68	5160.86	4837.59	4455.18	4059.01
135.0	6301.54	6217.29	6041.02	5840.25	5597.05	5246.30	4927.82	4595.60	4214.97
180.0	6241.19	6113.92	5937.65	5647.25	5381.94	5079.59	4672.08	4337.46	3992.69
225.0	6315.28	6305.13	6198.17	6033.85	5831.88	5552.24	5276.78	4937.98	4578.27
270.0	6272.26	6318.27	6275.25	6161.12	5999.19	5721.34	5462.61	5175.20	4825.64
315.0	6301.54	6319.47	6253.74	6115.71	5937.65	5708.19	5408.23	5073.02	4753.34
360.0	6241.19	6318.87	6301.54	6223.26	6068.50	5861.76	5582.12	5260.05	4946.94

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	4580.66	4198.24	3854.06	3517.65	3104.16	2787.47	2488.11	2185.76	1916.87
45.0	3951.46	3602.50	3224.27	2902.20	2555.03	2246.71	2005.90	1767.49	1558.36
90.0	3708.26	3330.03	2964.94	2658.41	2371.00	2024.43	1832.62	1634.24	1418.53
135.0	3822.39	3520.64	3102.97	2782.10	2480.34	2145.73	1914.48	1708.93	1480.08
180.0	3600.71	3218.29	2896.22	2555.63	2247.31	2001.72	1759.13	1571.50	1382.68
225.0	4246.64	3861.83	3474.03	3134.64	2813.17	2444.49	2177.40	1941.97	1705.95
270.0	4462.94	4134.90	3749.49	3410.10	3036.64	2687.09	2397.88	2100.91	1845.17
315.0	4378.69	3996.27	3656.28	3272.07	2944.62	2600.45	2290.33	2040.56	1821.87
360.0	4580.66	4198.24	3854.06	3517.65	3104.16	2787.47	2488.11	2185.76	1916.87

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1712.52	1513.54	1342.05	1211.19	1092.28	979.35	877.77	769.02	672.22
45.0	1395.23	1256.01	1100.65	991.30	900.48	795.91	687.16	589.76	486.99
90.0	1184.24	1136.92	1021.54	900.83	809.83	717.33	611.33	509.87	422.09
135.0	1322.93	1188.49	1035.52	929.16	837.14	720.62	621.43	530.01	430.82
180.0	1181.20	1085.89	968.18	849.75	753.25	660.39	532.70	456.99	373.22
225.0	1502.19	1342.05	1164.88	1042.51	940.81	817.36	731.61	622.92	508.20
270.0	1649.18	1474.70	1285.28	1153.23	1034.92	924.38	817.42	717.03	608.88
315.0	1585.24	1419.73	1191.29	1114.51	1004.63	910.69	803.74	693.25	599.44
360.0	1712.52	1513.54	1342.05	1211.19	1092.28	979.35	877.77	769.02	672.22

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	573.63	455.91	368.08	309.52	219.65	151.65	109.95	81.02	63.76
45.0	391.38	308.32	263.75	168.80	121.66	90.94	67.28	59.10	56.17
90.0	331.99	257.71	187.98	132.89	97.34	72.90	62.20	58.14	55.51
135.0	342.38	304.14	197.36	149.02	109.53	79.65	67.88	61.90	58.62
180.0	282.15	217.08	164.32	114.79	90.88	72.54	65.49	62.20	58.68
225.0	432.07	349.20	251.86	199.28	149.56	100.33	81.86	71.34	65.55
270.0	501.33	412.30	320.87	302.35	183.14	132.23	99.61	78.10	69.97
315.0	494.57	406.08	315.02	236.80	178.12	126.20	90.11	72.36	65.07
360.0	573.63	455.91	368.08	309.52	219.65	151.65	109.95	81.02	63.76

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	59.10	56.23	53.00	49.48	47.03	44.10	40.81	38.30	35.67
45.0	52.46	49.59	47.09	43.68	41.23	38.54	35.55	33.46	31.61
90.0	51.51	48.76	46.31	42.42	39.80	37.58	34.90	32.57	30.59
135.0	55.51	52.34	48.70	46.07	42.66	39.86	36.75	34.42	32.03
180.0	54.32	51.57	49.06	44.52	41.83	39.26	36.15	33.64	31.49
225.0	61.43	57.96	53.84	50.19	47.03	43.44	40.81	37.70	34.72
270.0	64.53	61.01	56.47	52.88	50.07	46.49	42.60	39.97	37.17
315.0	60.05	57.12	53.78	49.95	47.38	44.04	40.69	38.00	35.19
360.0	59.10	56.23	53.00	49.48	47.03	44.10	40.81	38.30	35.67

Intensity data(cd)

C/γ(°)	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0
0.0	33.40	31.25	28.80	26.65	25.28	22.95	21.39	20.08	18.46
45.0	28.86	26.89	25.16	23.30	21.63	20.38	18.82	17.63	16.67
90.0	28.02	26.11	24.26	22.41	21.09	19.66	18.16	17.15	16.25
135.0	29.34	27.19	25.34	23.60	21.69	20.14	18.70	17.57	16.31
180.0	28.74	26.59	25.10	22.89	21.39	19.96	18.28	17.09	16.31
225.0	32.63	30.23	27.37	25.75	23.90	21.75	20.50	18.94	17.51
270.0	34.12	32.15	29.52	27.25	25.34	23.24	21.51	20.14	18.46
315.0	32.74	30.65	27.90	25.93	24.38	22.17	20.55	19.30	17.87
360.0	33.40	31.25	28.80	26.65	25.28	22.95	21.39	20.08	18.46

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	17.27	16.37	15.54	14.76	14.16	13.56	13.03	12.61	12.25
45.0	15.83	15.12	14.40	13.74	13.32	12.85	12.43	12.07	11.77
90.0	15.36	14.64	14.10	13.56	13.03	12.61	12.25	11.83	11.53
135.0	15.54	14.82	14.04	13.50	13.03	12.61	12.19	11.83	11.47
180.0	15.36	14.70	14.10	13.38	12.97	12.55	12.19	11.71	11.41
225.0	16.37	15.66	14.94	14.22	13.62	13.15	12.67	12.19	11.89
270.0	17.21	16.31	15.42	14.64	14.10	13.56	12.97	12.55	12.19
315.0	16.61	15.77	15.06	14.28	13.68	13.21	12.67	12.25	11.95
360.0	17.27	16.37	15.54	14.76	14.16	13.56	13.03	12.61	12.25

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	11.89	11.53	11.29	11.05	10.76	10.40	10.16	9.92	9.68
45.0	11.41	11.17	10.88	10.52	10.22	9.98	9.74	9.50	9.26
90.0	11.23	10.99	10.70	10.34	10.10	9.86	9.56	9.32	9.02
135.0	11.17	10.88	10.58	10.28	9.98	9.74	9.50	9.26	8.96
180.0	11.05	10.70	10.46	10.22	9.92	9.62	9.38	9.14	8.90
225.0	11.53	11.23	10.93	10.64	10.34	10.10	9.80	9.56	9.32
270.0	11.83	11.47	11.17	10.88	10.58	10.28	9.98	9.80	9.50
315.0	11.59	11.29	10.99	10.70	10.40	10.16	9.80	9.62	9.44
360.0	11.89	11.53	11.29	11.05	10.76	10.40	10.16	9.92	9.68

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	9.44	9.14	8.84	8.60	8.37	8.13	7.95	7.71	7.53
45.0	8.96	8.72	8.48	8.19	8.01	7.83	7.59	7.47	7.29
90.0	8.78	8.54	8.37	8.13	7.83	7.59	7.41	7.23	7.11
135.0	8.72	8.48	8.25	8.07	7.89	7.65	7.35	7.23	6.99
180.0	8.60	8.37	8.19	8.01	7.77	7.59	7.35	7.11	6.93
225.0	9.02	8.78	8.54	8.37	8.19	7.95	7.77	7.59	7.35
270.0	9.26	8.96	8.72	8.48	8.25	8.13	7.89	7.65	7.47
315.0	9.08	8.84	8.66	8.37	8.19	7.95	7.71	7.53	7.35
360.0	9.44	9.14	8.84	8.60	8.37	8.13	7.95	7.71	7.53

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	7.41	7.29	7.11	7.05	6.93	6.81	6.57	6.39	6.21
45.0	7.11	7.05	6.99	6.81	6.63	6.45	6.21	6.04	5.98
90.0	6.93	6.81	6.63	6.57	6.39	6.21	6.09	5.98	5.92
135.0	6.93	6.75	6.63	6.51	6.39	6.21	6.09	5.98	5.92
180.0	6.81	6.69	6.57	6.45	6.33	6.21	6.09	5.98	5.98
225.0	7.23	7.05	6.87	6.69	6.63	6.45	6.27	6.15	6.09
270.0	7.23	7.11	6.93	6.81	6.75	6.57	6.45	6.27	6.15
315.0	7.17	7.05	6.99	6.87	6.75	6.57	6.39	6.21	6.09
360.0	7.41	7.29	7.11	7.05	6.93	6.81	6.57	6.39	6.21

Intensity data(cd)

C/γ(°)	90.0
0.0	6.04
45.0	5.98
90.0	5.92
135.0	5.92
180.0	5.98
225.0	5.98
270.0	5.98
315.0	5.98
360.0	6.04