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Address:380JinOU Road,GaoXin Zone,Jiang Men City,Guangdong,China

Nata

LumCAT: 1-0940-N
Luminaire: 92.70.259.00
Report No: 200923-B036
Test No: 200923-C036
LampCAT: CITIZEN CLU700
Lamp flux(lm): 836.3
Number of Lamps: 1
Length(feet)(ft.):0.000
Phm Type: C

Voltage(V): 230.8000
Current(A): 0.0840
Power (W): 10.4100
PF: 0.5350
Ballast type: AC
Width(feet)(ft.):0.000
Height(feet)(ft.):0.000

Photometric Results

Lumens(lm): 670.35
Efficiency(%): 80.16%
Lumens(lm)/Power(W): 64.40
Central intensity(cd): 4763.768
Maximum intensity(cd): 4763.768
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=15.2
[C90/270]Total=15.2
Field angle(10%Imax): [C0/180]Total=41.1
[C90/270]Total=41.1
Maximum s/h(1/2): C0_180=0.26 C90_270=0.26
Maximum s/h(1/4): C0_180=0.29 C90_270=0.29
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 80.29%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 99.313%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4763.767	1.140	1.14	.136%	.170%
1.0	4686.274	8.969	10.109	1.072%	1.508%
2.0	4536.507	17.362	27.47	2.076%	4.098%
3.0	4252.576	24.406	51.877	2.918%	7.739%
4.0	3908.206	29.896	81.773	3.575%	12.198%
5.0	3491.852	33.374	115.146	3.991%	17.177%
6.0	3069.871	35.189	150.335	4.208%	22.426%
7.0	2613.784	34.931	185.267	4.177%	27.637%
8.0	2241.398	34.208	219.475	4.090%	32.740%
9.0	1894.010	32.491	251.966	3.885%	37.587%
10.0	1584.964	30.182	282.147	3.609%	42.089%
11.0	1345.877	28.162	310.309	3.367%	46.290%
12.0	1178.001	26.858	337.167	3.211%	50.297%
13.0	1050.479	25.914	363.081	3.099%	54.162%
14.0	913.606	24.237	387.318	2.898%	57.778%
15.0	827.290	23.480	410.798	2.808%	61.281%
16.0	747.854	22.605	433.403	2.703%	64.653%
17.0	687.634	22.047	455.45	2.636%	67.942%
18.0	617.913	20.939	476.389	2.504%	71.065%
19.0	559.091	19.961	496.35	2.387%	74.043%
20.0	507.154	19.021	515.372	2.274%	76.880%
21.0	451.916	17.760	533.131	2.124%	79.530%
22.0	408.941	16.799	549.931	2.009%	82.036%
23.0	369.504	15.832	565.763	1.893%	84.398%
24.0	324.539	14.475	580.239	1.731%	86.557%
25.0	287.219	13.311	593.55	1.592%	88.543%
26.0	254.401	12.230	605.779	1.462%	90.367%
27.0	215.085	10.708	616.487	1.280%	91.964%
28.0	183.270	9.435	625.922	1.128%	93.372%
29.0	157.418	8.369	634.292	1.001%	94.620%
30.0	119.964	6.578	640.869	.787%	95.602%
31.0	86.589	4.890	645.76	.585%	96.331%
32.0	63.248	3.675	649.435	.439%	96.879%
33.0	45.446	2.714	652.149	.325%	97.284%
34.0	33.051	2.027	654.176	.242%	97.587%
35.0	24.176	1.521	655.697	.182%	97.813%
36.0	18.904	1.218	656.915	.146%	97.995%
37.0	15.986	1.055	657.97	.126%	98.153%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	14.188	0.958	658.928	.115%	98.295%
39.0	12.459	0.860	659.788	.103%	98.424%
40.0	11.050	0.779	660.567	.093%	98.540%
41.0	9.704	0.698	661.265	.083%	98.644%
42.0	8.393	0.616	661.881	.074%	98.736%
43.0	7.268	0.544	662.424	.065%	98.817%
44.0	6.363	0.485	662.909	.058%	98.889%
45.0	5.522	0.428	663.337	.051%	98.953%
46.0	4.803	0.379	663.716	.045%	99.010%
47.0	4.205	0.337	664.053	.040%	99.060%
48.0	3.741	0.305	664.358	.036%	99.106%
49.0	3.358	0.278	664.636	.033%	99.147%
50.0	3.057	0.257	664.893	.031%	99.185%
51.0	2.813	0.240	665.133	.029%	99.221%
52.0	2.633	0.228	665.36	.027%	99.255%
53.0	2.442	0.214	665.574	.026%	99.287%
54.0	2.297	0.204	665.778	.024%	99.317%
55.0	2.198	0.197	665.976	.024%	99.347%
56.0	2.059	0.187	666.163	.022%	99.375%
57.0	1.966	0.181	666.344	.022%	99.402%
58.0	1.885	0.175	666.519	.021%	99.428%
59.0	1.821	0.171	666.69	.020%	99.453%
60.0	1.763	0.167	666.858	.020%	99.478%
61.0	1.700	0.163	667.021	.019%	99.503%
62.0	1.665	0.161	667.182	.019%	99.527%
63.0	1.636	0.160	667.342	.019%	99.551%
64.0	1.595	0.157	667.499	.019%	99.574%
65.0	1.560	0.155	667.654	.019%	99.597%
66.0	1.514	0.152	667.806	.018%	99.620%
67.0	1.479	0.149	667.955	.018%	99.642%
68.0	1.444	0.147	668.102	.018%	99.664%
69.0	1.398	0.143	668.245	.017%	99.685%
70.0	1.340	0.138	668.383	.017%	99.706%
71.0	1.311	0.136	668.519	.016%	99.726%
72.0	1.247	0.130	668.649	.016%	99.746%
73.0	1.177	0.123	668.772	.015%	99.764%
74.0	1.119	0.118	668.89	.014%	99.782%
75.0	1.050	0.111	669.002	.013%	99.798%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	1.021	0.109	669.11	.013%	99.814%
77.0	0.963	0.103	669.213	.012%	99.830%
78.0	0.928	0.100	669.313	.012%	99.845%
79.0	0.893	0.096	669.409	.011%	99.859%
80.0	0.864	0.093	669.502	.011%	99.873%
81.0	0.835	0.090	669.593	.011%	99.886%
82.0	0.806	0.088	669.68	.010%	99.899%
83.0	0.795	0.086	669.767	.010%	99.912%
84.0	0.754	0.082	669.849	.010%	99.925%
85.0	0.731	0.080	669.929	.010%	99.936%
86.0	0.806	0.088	670.017	.011%	99.950%
87.0	0.916	0.100	670.117	.012%	99.965%
88.0	0.951	0.104	670.222	.012%	99.980%
89.0	0.835	0.092	670.313	.011%	99.994%
90.0	0.754	0.041	670.354	.005%	100.000%

Zonal flux distribution table

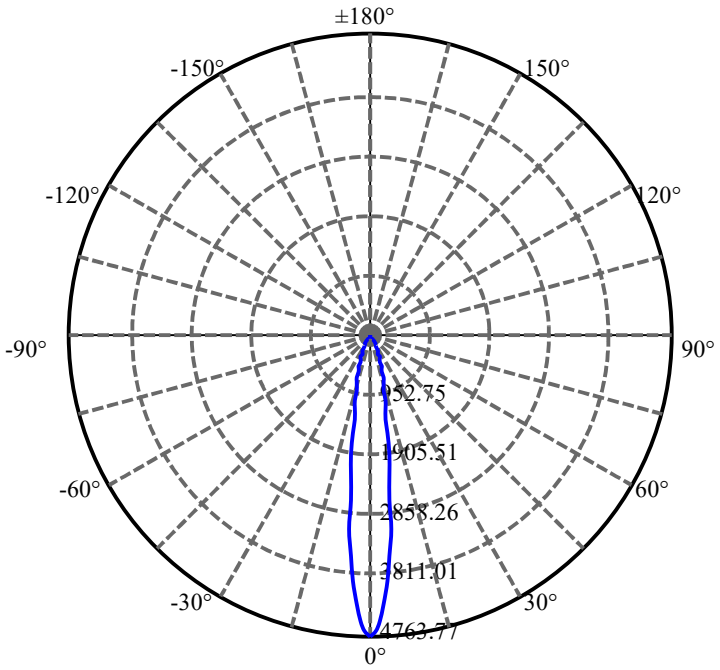
ZONAL LUMEN SUMMARY

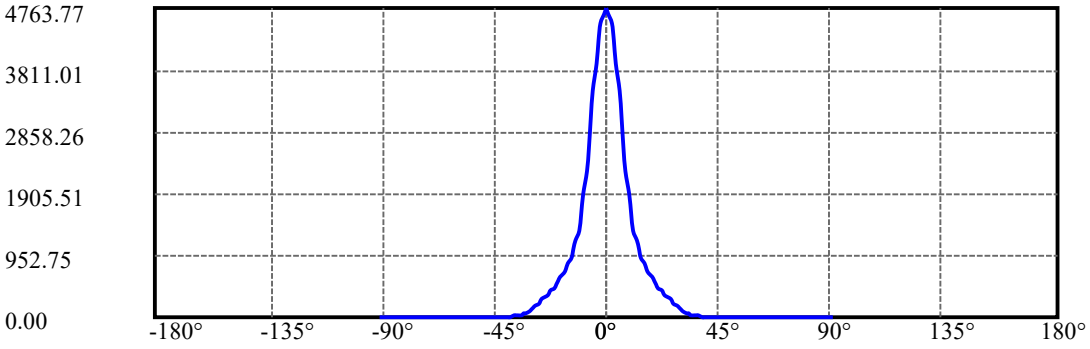
Zone	Lumens	%Lamp	%Fixt
0-30	640.87	76.63%	95.60%
0-40	660.57	78.98%	98.54%
0-60	666.86	79.74%	99.48%
0-90	670.31	80.15%	99.99%
0-120	670.31	80.15%	99.99%
0-180	670.35	80.16%	100.00%
60-90	3.62	0.43%	0.54%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-21.19	536.28	64.12%	80.00%

ZONAL LUMEN SUMMARY

0-10	282.15
10-20	233.22
20-30	125.50
30-40	19.70
40-50	4.33
50-60	1.96
60-70	1.53
70-80	1.12
80-90	0.81
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]





C90/C270:

Field angle(10%Imax):C90/270Left:20.6 Right:20.6

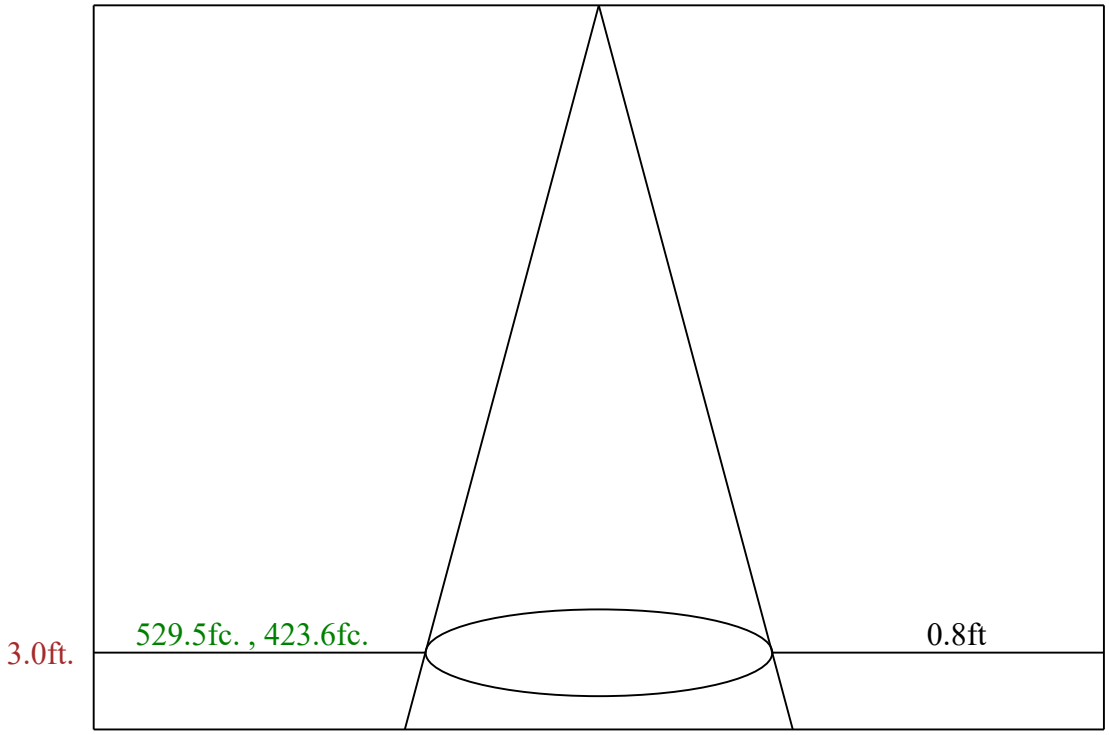
Beam Angle(50%Imax):C90/270Left:7.6 Right:7.6

Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2020/9/23
Humidity(%): 60.0%

Operator: NT0100
Distance(feet): 22.35

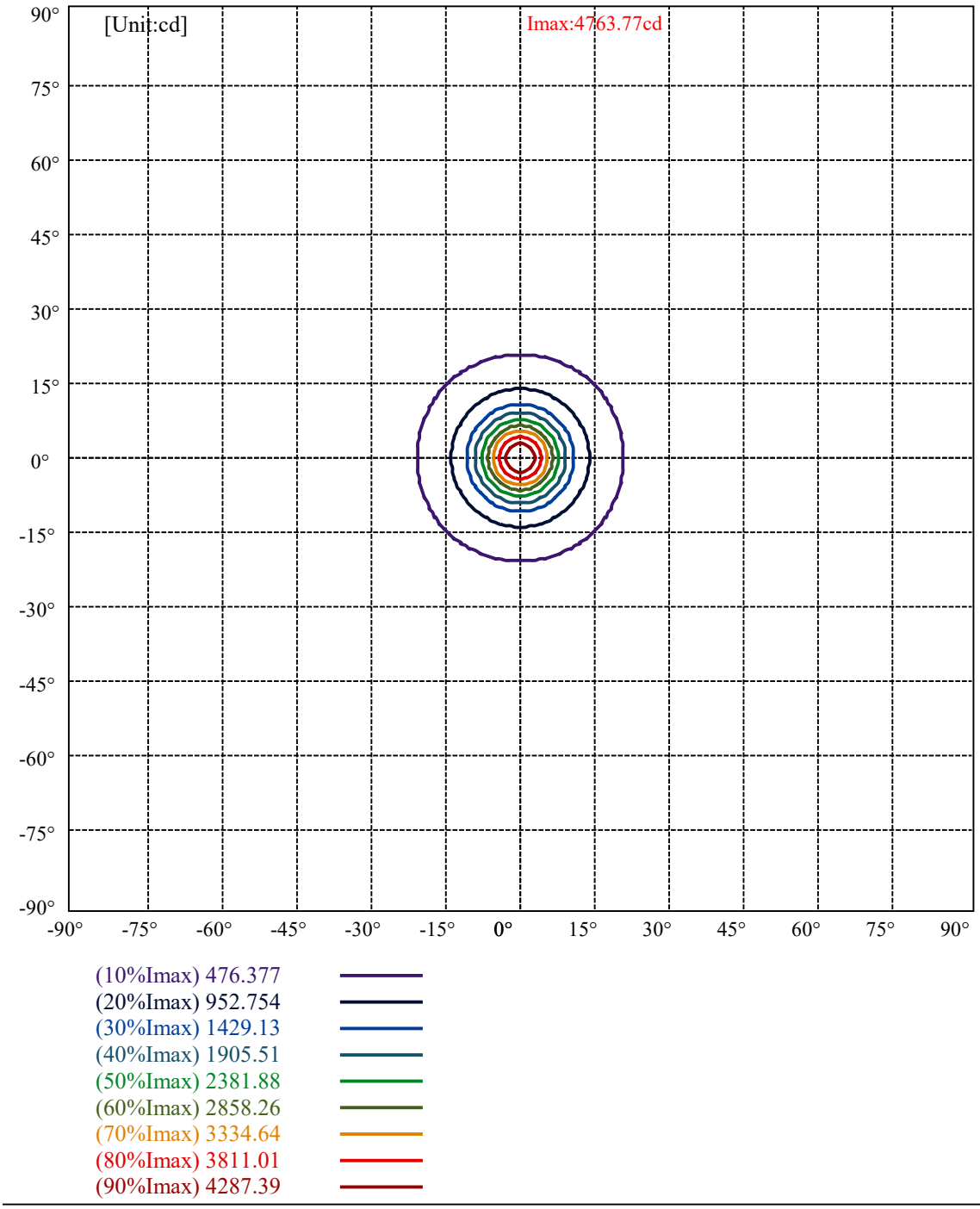
Lux distance Curve



Max , Ave

Beam angle of C0 plane 15.45

ISO-Intensity(V-H)

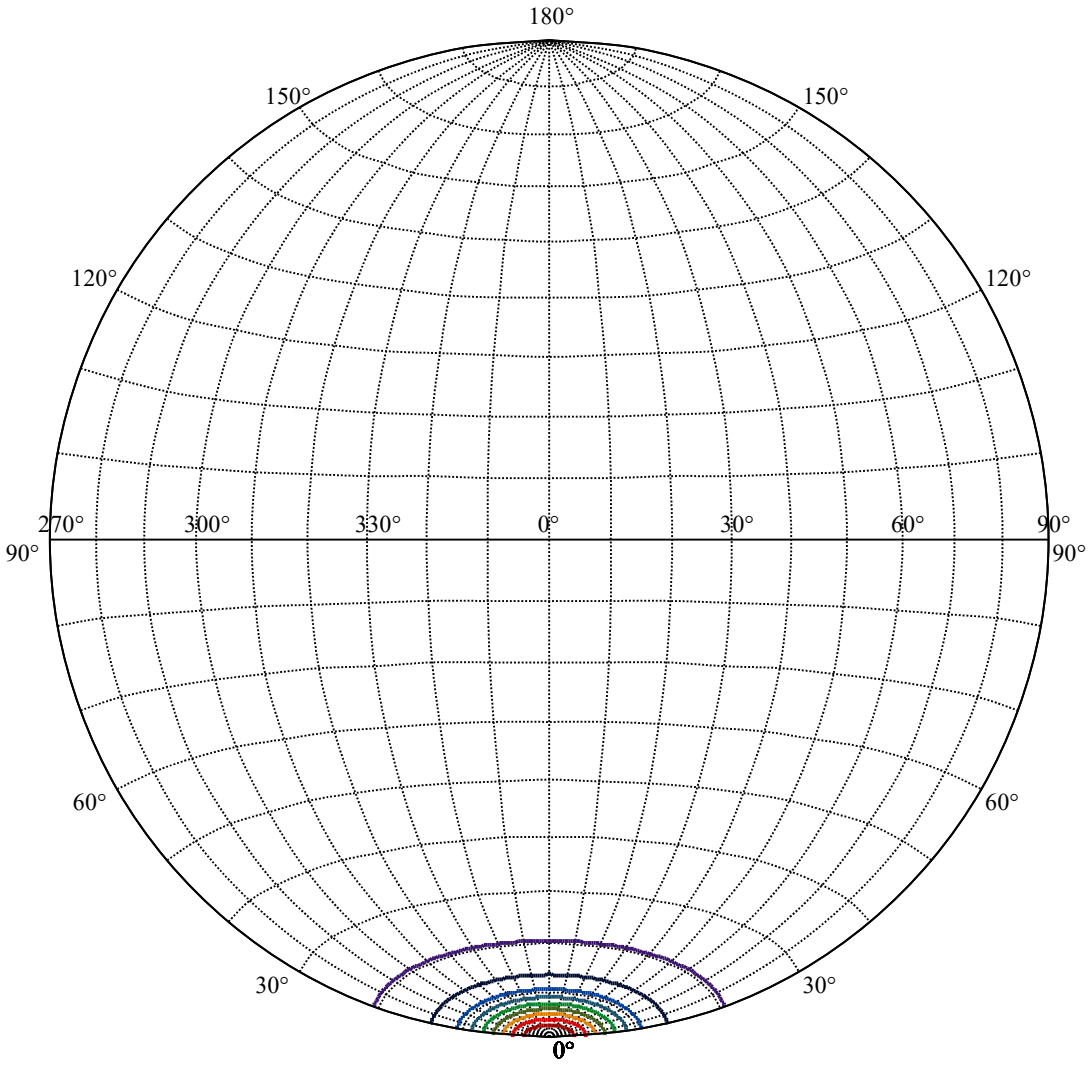


Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2020/9/23
Humidity(%): 60.0%

Operator: NT0100
Distance(feet): 22.35

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:4763.77

(10%Imax) 476.377
(20%Imax) 952.754
(30%Imax) 1429.13
(40%Imax) 1905.51
(50%Imax) 2381.88
(60%Imax) 2858.26
(70%Imax) 3334.64
(80%Imax) 3811.01
(90%Imax) 4287.39

Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2020/9/23
Humidity(%): 60.0%

Operator: NT0100
Distance(feet): 22.35

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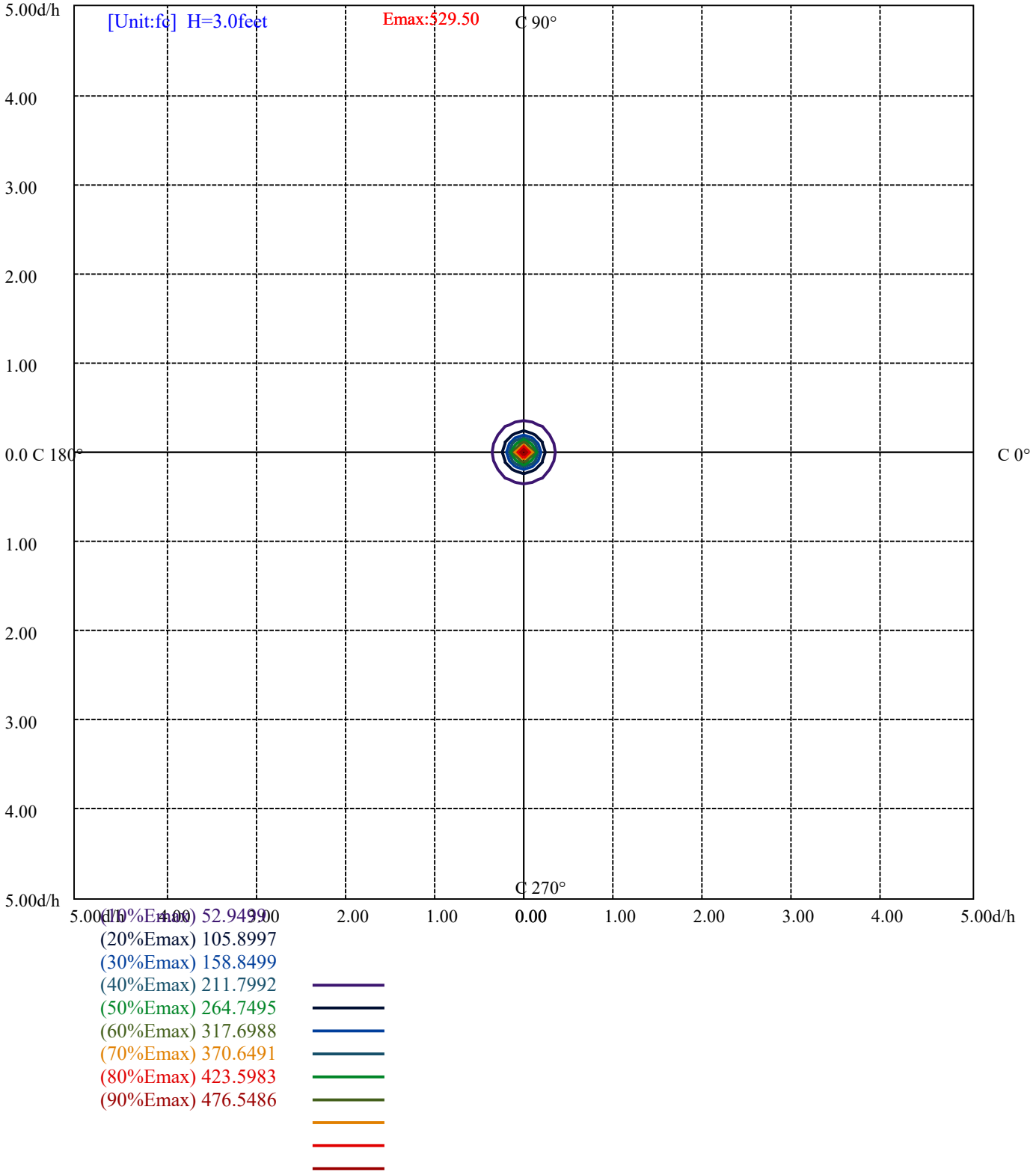
ISO illuminance diagram

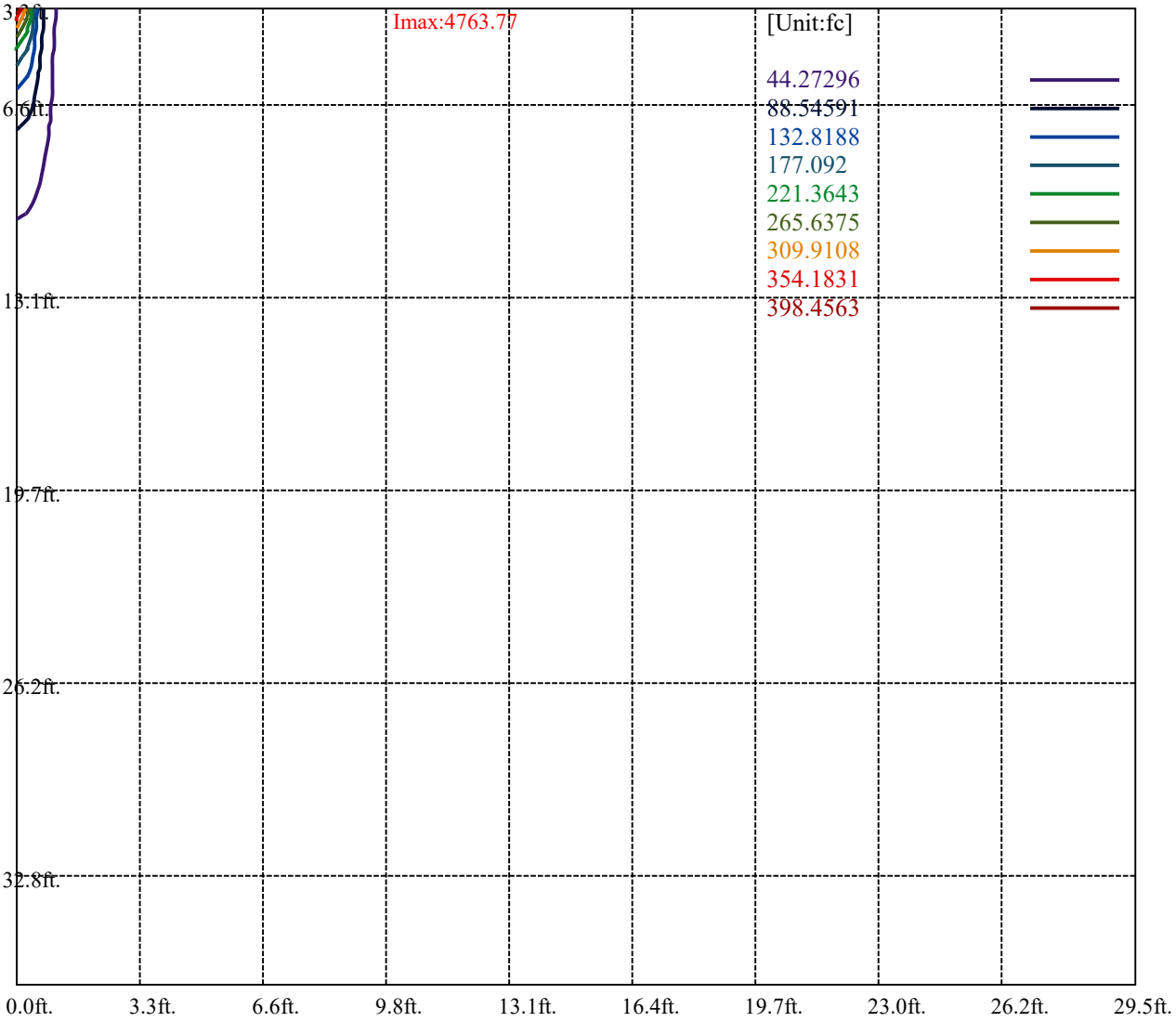


Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2020/9/23
Humidity(%): 60.0%

Operator: NT0100
Distance(feet): 22.35

Space ISO Lux diagram



Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2020/9/23
Humidity(%): 60.0%

Operator: NT0100
Distance(feet): 22.35

Luminance Limitting Curve(no luminous side)

Luminance Table

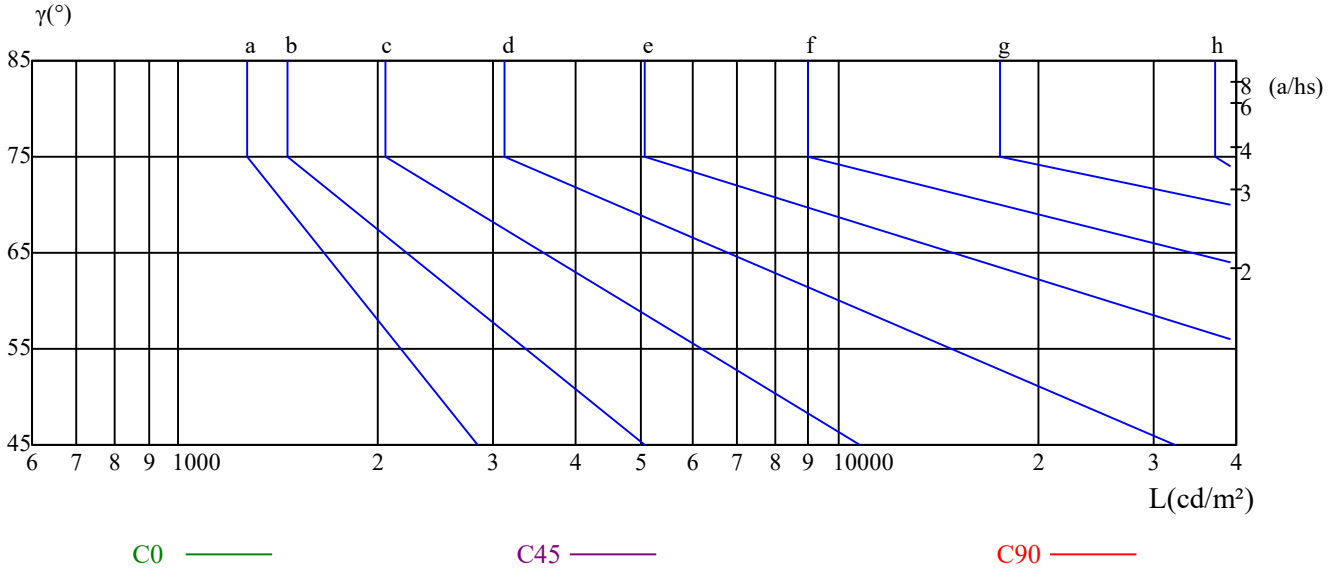
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

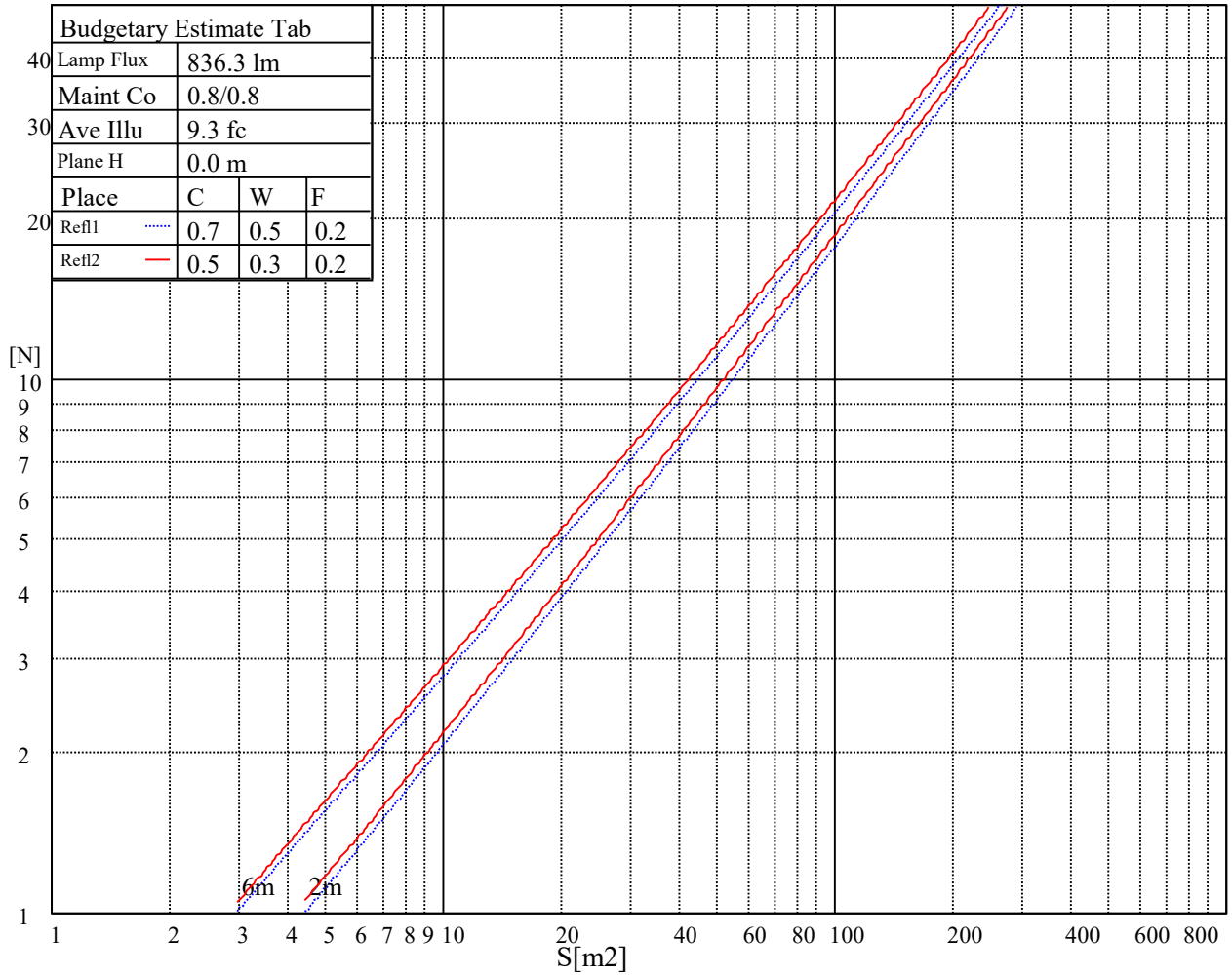
Glare Table

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: GMS 1800
Temperature(°C): 25.0

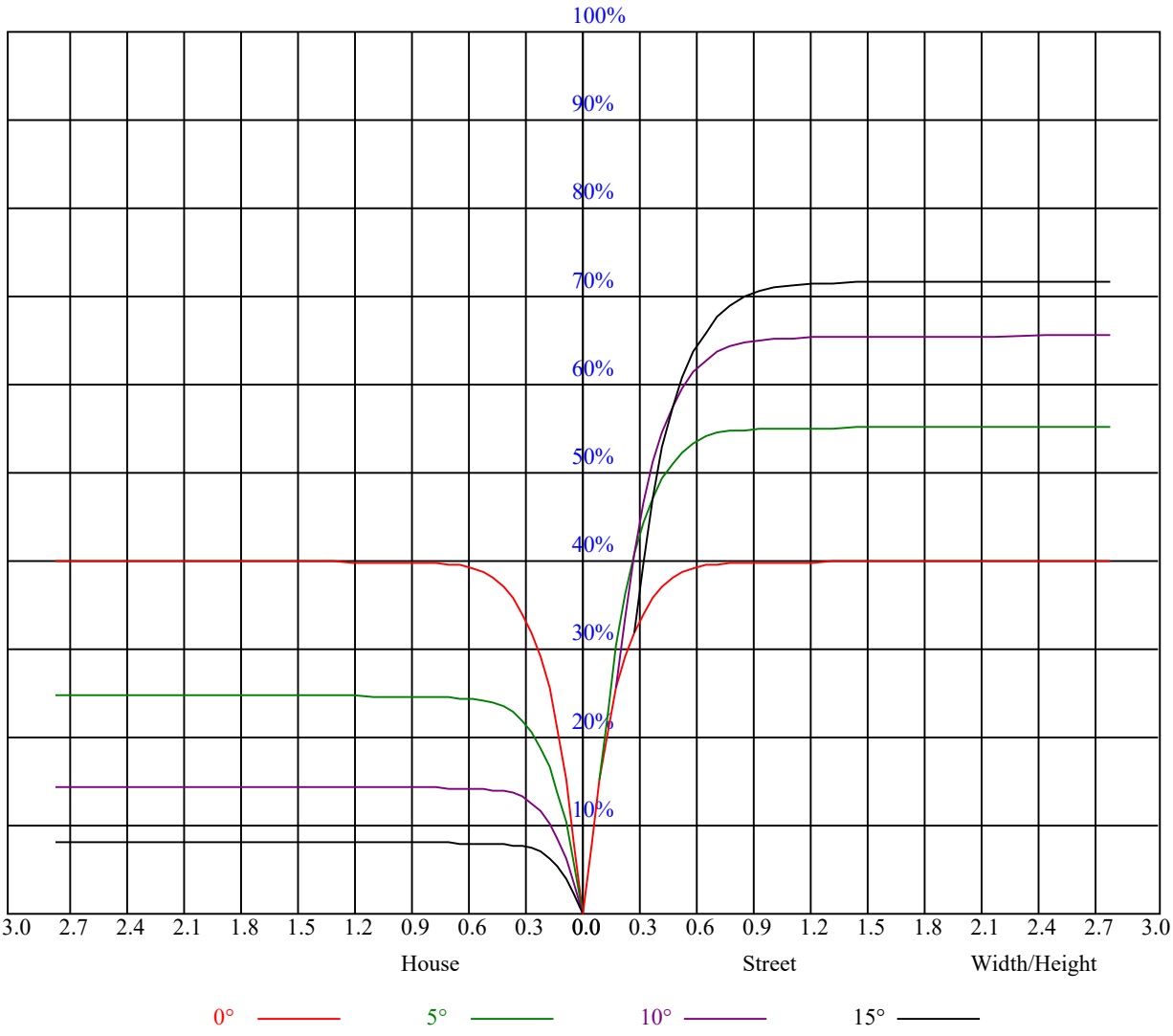
Date: 2020/9/23
Humidity(%): 60.0%

Operator: NT0100
Distance(feet): 22.35

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	0.96	0.96	0.96	0.93	0.93	0.93	0.89	0.89	0.89	0.85	0.85	0.85	0.82	0.82	0.82	0.80
1	0.90	0.89	0.88	0.89	0.87	0.86	0.86	0.84	0.84	0.83	0.82	0.81	0.80	0.79	0.79	0.77
2	0.86	0.84	0.82	0.85	0.83	0.81	0.83	0.81	0.79	0.80	0.79	0.78	0.78	0.77	0.76	0.75
3	0.83	0.80	0.78	0.82	0.79	0.77	0.80	0.78	0.76	0.78	0.76	0.75	0.76	0.75	0.74	0.73
4	0.80	0.77	0.74	0.79	0.76	0.74	0.77	0.75	0.73	0.76	0.74	0.72	0.74	0.73	0.71	0.70
5	0.77	0.74	0.71	0.76	0.73	0.71	0.75	0.72	0.70	0.74	0.72	0.70	0.73	0.71	0.69	0.68
6	0.74	0.71	0.69	0.74	0.71	0.69	0.73	0.70	0.68	0.72	0.69	0.68	0.71	0.69	0.67	0.66
7	0.72	0.69	0.67	0.72	0.69	0.66	0.71	0.68	0.66	0.70	0.68	0.66	0.69	0.67	0.65	0.65
8	0.70	0.67	0.65	0.70	0.67	0.64	0.69	0.66	0.64	0.68	0.66	0.64	0.68	0.65	0.64	0.63
9	0.68	0.65	0.63	0.68	0.65	0.63	0.67	0.64	0.63	0.67	0.64	0.62	0.66	0.64	0.62	0.61
10	0.66	0.63	0.61	0.66	0.63	0.61	0.66	0.63	0.61	0.65	0.63	0.61	0.65	0.62	0.61	0.60

Coefficient Utilization Curve



Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2020/9/23
Humidity(%): 60.0%

Operator: NT0100
Distance(feet): 22.35

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	4725.48	4583.95	4330.13	3952.40	3509.25	3024.34	2556.13	2145.46	1801.61
45.0	4710.64	4821.08	4889.75	4862.84	4712.96	4435.00	4053.10	3585.35	3086.98
90.0	4908.31	4996.94	4980.24	4861.91	4632.68	4272.12	3820.62	3298.58	2792.79
135.0	4710.64	4868.41	4899.50	4828.50	4637.32	4338.48	4093.01	3430.37	3124.11
180.0	4725.48	4751.93	4711.10	4443.35	4257.27	3854.49	3379.32	2893.02	2426.20
225.0	4710.64	4306.46	4057.28	3571.90	3056.36	2565.87	2125.97	1773.30	1499.52
270.0	4908.31	4748.69	4415.97	3974.21	3443.36	2916.22	2425.27	2012.75	1689.31
315.0	4710.64	4412.73	4008.09	3525.49	3016.45	2528.29	2105.55	1771.45	1510.66
360.0	4725.48	4583.95	4330.13	3952.40	3509.25	3024.34	2556.13	2145.46	1801.61

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	1530.61	1324.12	1161.71	924.03	924.03	847.05	763.66	676.28	623.94
45.0	2598.36	2164.02	1810.43	1533.86	1325.51	1162.17	1029.46	916.23	858.69
90.0	2325.97	1932.47	1638.73	1404.86	1224.82	920.32	899.39	861.34	804.03
135.0	2630.37	2034.55	1824.35	1543.14	1332.94	1163.56	1028.07	909.27	812.29
180.0	2022.49	1691.63	1440.59	1248.48	1099.99	975.63	873.08	784.91	708.81
225.0	1291.17	1130.62	877.21	877.21	787.33	708.39	641.85	582.41	552.85
270.0	1442.91	1251.27	1098.60	977.02	871.22	778.42	701.85	635.96	578.42
315.0	1310.20	1151.03	915.40	915.40	838.00	753.31	680.97	616.42	562.04
360.0	1530.61	1324.12	1161.71	924.03	924.03	847.05	763.66	676.28	623.94

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	568.49	516.28	467.47	418.60	372.29	327.98	291.27	254.85	217.49
45.0	739.44	668.44	630.39	550.11	500.00	469.83	419.72	371.46	329.23
90.0	724.40	652.48	592.43	537.81	485.05	435.82	387.33	343.71	306.17
135.0	729.23	659.16	597.44	540.83	493.50	442.92	396.98	351.97	311.13
180.0	642.92	585.38	534.80	486.54	436.89	396.98	342.69	312.99	279.58
225.0	501.76	455.22	401.39	349.83	314.43	281.39	246.45	210.76	175.87
270.0	526.91	476.33	423.43	370.07	346.86	313.92	262.87	240.14	240.14
315.0	510.16	459.44	409.88	361.53	322.50	287.19	249.00	211.88	175.59
360.0	568.49	516.28	467.47	418.60	372.29	327.98	291.27	254.85	217.49

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	180.69	145.10	111.69	82.04	56.84	37.73	26.22	20.19	16.80
45.0	292.57	257.31	242.46	201.44	138.37	104.92	75.41	51.60	34.20
90.0	270.90	232.94	196.01	161.85	128.63	97.40	69.51	46.87	31.04
135.0	282.83	240.60	240.60	200.51	143.11	111.23	82.60	57.40	38.05
180.0	244.31	237.35	195.03	134.06	100.65	70.67	47.61	32.39	23.90
225.0	141.30	108.03	76.94	48.91	32.48	22.97	19.81	17.82	15.64
270.0	166.73	134.24	103.67	74.11	47.75	30.63	21.81	19.35	17.22
315.0	141.34	110.58	92.95	56.80	44.87	30.44	20.60	18.79	16.57
360.0	180.69	145.10	111.69	82.04	56.84	37.73	26.22	20.19	16.80

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	15.59	13.04	12.02	10.63	9.37	8.21	7.10	6.13	5.24
45.0	24.55	21.11	18.24	15.78	14.85	12.99	11.18	9.70	8.40
90.0	22.27	18.84	17.26	15.45	13.13	11.79	10.12	8.82	7.70
135.0	25.89	19.63	16.98	14.90	12.99	11.42	10.12	8.91	8.12
180.0	19.44	17.17	15.22	13.41	12.34	10.53	8.96	7.70	6.82
225.0	13.78	11.83	10.90	9.74	8.07	7.33	6.31	5.48	4.83
270.0	15.17	13.55	11.93	10.44	9.56	8.21	7.29	6.31	5.43
315.0	14.52	12.71	10.95	9.33	8.07	7.15	6.08	5.10	4.36
360.0	15.59	13.04	12.02	10.63	9.37	8.21	7.10	6.13	5.24

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	4.59	4.13	3.62	3.16	2.92	2.74	2.60	2.37	2.23
45.0	7.29	6.36	5.52	4.83	4.18	3.76	3.48	3.20	2.92
90.0	6.64	5.61	4.92	4.36	3.90	3.48	3.20	2.97	2.74
135.0	7.01	5.89	5.10	4.50	3.99	3.57	3.16	2.92	2.74
180.0	5.85	5.06	4.32	3.85	3.39	3.06	2.83	2.64	2.41
225.0	4.27	3.76	3.39	3.16	2.88	2.64	2.46	2.37	2.27
270.0	4.69	4.18	3.71	3.29	2.97	2.74	2.60	2.46	2.27
315.0	3.85	3.43	3.06	2.78	2.64	2.46	2.18	2.13	1.95
360.0	4.59	4.13	3.62	3.16	2.92	2.74	2.60	2.37	2.23

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	2.18	2.04	1.90	1.86	1.81	1.81	1.72	1.67	1.62
45.0	2.74	2.64	2.46	2.32	2.23	2.09	2.04	1.95	1.86
90.0	2.51	2.46	2.32	2.23	2.04	1.95	1.90	1.76	1.72
135.0	2.55	2.37	2.18	2.09	2.00	1.90	1.81	1.72	1.72
180.0	2.23	2.13	2.04	1.90	1.76	1.72	1.67	1.62	1.53
225.0	2.13	2.00	1.90	1.86	1.81	1.76	1.67	1.67	1.67
270.0	2.13	2.09	1.95	1.86	1.86	1.76	1.76	1.72	1.72
315.0	1.90	1.86	1.72	1.62	1.58	1.58	1.53	1.48	1.48
360.0	2.18	2.04	1.90	1.86	1.81	1.81	1.72	1.67	1.62

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	1.67	1.58	1.48	1.53	1.48	1.44	1.35	1.35	1.30
45.0	1.76	1.76	1.76	1.67	1.62	1.62	1.62	1.53	1.48
90.0	1.67	1.67	1.62	1.58	1.53	1.53	1.48	1.39	1.39
135.0	1.67	1.62	1.58	1.48	1.48	1.44	1.39	1.30	1.35
180.0	1.58	1.53	1.53	1.44	1.39	1.44	1.39	1.30	1.25
225.0	1.62	1.58	1.53	1.53	1.48	1.44	1.35	1.30	1.30
270.0	1.62	1.58	1.58	1.53	1.48	1.39	1.39	1.35	1.25
315.0	1.48	1.44	1.39	1.35	1.35	1.25	1.21	1.21	1.16
360.0	1.67	1.58	1.48	1.53	1.48	1.44	1.35	1.35	1.30

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	1.16	1.11	1.07	1.02	0.93	0.93	0.88	0.88	0.84
45.0	1.48	1.44	1.35	1.25	1.21	1.21	1.11	1.11	1.07
90.0	1.39	1.30	1.21	1.11	1.11	1.02	1.07	0.97	0.97
135.0	1.30	1.25	1.16	1.07	1.07	0.97	0.88	0.88	0.84
180.0	1.25	1.16	1.11	1.02	1.02	0.93	0.84	0.79	0.79
225.0	1.21	1.11	1.07	1.07	1.02	0.93	0.97	0.93	0.93
270.0	1.16	1.11	1.07	0.97	0.93	0.93	0.93	0.84	0.79
315.0	1.02	0.93	0.93	0.88	0.88	0.79	0.74	0.74	0.70
360.0	1.16	1.11	1.07	1.02	0.93	0.93	0.88	0.88	0.84

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	0.79	0.79	0.74	0.70	0.65	0.60	0.51	0.51	0.46
45.0	1.11	1.07	1.07	1.11	1.21	1.95	3.25	3.85	3.29
90.0	0.93	0.88	0.88	0.84	0.88	0.84	0.84	0.84	0.79
135.0	0.84	0.74	0.70	0.60	0.60	0.60	0.56	0.46	0.42
180.0	0.74	0.65	0.65	0.60	0.51	0.51	0.46	0.42	0.32
225.0	0.88	0.97	0.97	0.88	0.79	0.79	0.65	0.56	0.60
270.0	0.79	0.74	0.79	0.74	0.70	0.70	0.65	0.60	0.46
315.0	0.60	0.60	0.56	0.56	0.51	0.46	0.42	0.37	0.32
360.0	0.79	0.79	0.74	0.70	0.65	0.60	0.51	0.51	0.46

Intensity data(cd)

C/γ(°)	90.0
0.0	0.46
45.0	2.64
90.0	0.70
135.0	0.42
180.0	0.23
225.0	0.70
270.0	0.51
315.0	0.37
360.0	0.46