NATA LIGHTING CO.,LTD.
www.nata.cn
Email:info@nata.com
Tel:+86-750-3770000 Fax:+86-750-3771111
Address:380JinOU Road,GaoXin Zone,Jiang Men City,Guangdong,China

Nata

LumCAT: 3-2547-M
Luminaire: 92.70.131.00
Report No: 200921-B041
Test No: 200921-C041
LampCAT: SEOUL SAWx15 LES14.5
Lamp flux(lm): 2329.0
Number of Lamps: 1
Length(feet)(ft.):0.000
Phm Type: C

Voltage(V): 230.8000
Current(A): 0.0900
Power (W): 20.0000
PF: 0.9550
Ballast type: AC
Width(feet)(ft.):0.000
Height(feet)(ft.):0.000

Photometric Results

Lumens(lm): 2223.70
Efficiency(%): 95.48%
Lumens(lm)/Power(W): 111.19
Central intensity(cd): 5326.871
Maximum intensity(cd): 5326.871
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=35.6
[C90/270]Total=35.6
Field angle(10%Imax): [C0/180]Total=66.3
[C90/270]Total=66.3
Maximum s/h(1/2): C0_180=0.59 C90_270=0.59
Maximum s/h(1/4): C0_180=0.56 C90_270=0.56
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 95.53%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 99.678%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5326.872	1.274	1.274	.055%	.057%
1.0	5325.016	10.191	11.466	.438%	.516%
2.0	5323.160	20.372	31.838	.875%	1.432%
3.0	5313.705	30.496	62.334	1.309%	2.803%
4.0	5295.028	40.505	102.839	1.739%	4.625%
5.0	5263.937	50.310	153.15	2.160%	6.887%
6.0	5206.107	59.676	212.825	2.562%	9.571%
7.0	5138.648	68.674	281.5	2.949%	12.659%
8.0	5033.313	76.818	358.318	3.298%	16.114%
9.0	4894.683	83.967	442.285	3.605%	19.890%
10.0	4717.306	89.829	532.113	3.857%	23.929%
11.0	4505.417	94.273	626.386	4.048%	28.169%
12.0	4260.987	97.150	723.536	4.171%	32.537%
13.0	3996.430	98.585	822.121	4.233%	36.971%
14.0	3717.314	98.618	920.739	4.234%	41.406%
15.0	3465.054	98.346	1019.085	4.223%	45.828%
16.0	3139.708	94.903	1113.988	4.075%	50.096%
17.0	2851.137	91.412	1205.4	3.925%	54.207%
18.0	2617.787	88.709	1294.11	3.809%	58.196%
19.0	2289.889	81.754	1375.863	3.510%	61.873%
20.0	2038.963	76.474	1452.337	3.284%	65.312%
21.0	1810.542	71.152	1523.49	3.055%	68.511%
22.0	1582.238	64.998	1588.487	2.791%	71.434%
23.0	1414.490	60.608	1649.095	2.602%	74.160%
24.0	1239.085	55.267	1704.362	2.373%	76.645%
25.0	1120.380	51.924	1756.286	2.229%	78.980%
26.0	1049.209	50.438	1806.724	2.166%	81.249%
27.0	960.056	47.796	1854.52	2.052%	83.398%
28.0	903.804	46.530	1901.05	1.998%	85.490%
29.0	857.163	45.571	1946.621	1.957%	87.540%
30.0	800.637	43.899	1990.52	1.885%	89.514%
31.0	723.649	40.871	2031.392	1.755%	91.352%
32.0	641.323	37.268	2068.66	1.600%	93.028%
33.0	545.164	32.560	2101.22	1.398%	94.492%
34.0	449.242	27.548	2128.768	1.183%	95.731%
35.0	374.626	23.564	2152.332	1.012%	96.791%
36.0	286.198	18.448	2170.78	.792%	97.620%
37.0	209.656	13.836	2184.616	.594%	98.242%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	159.001	10.735	2195.351	.461%	98.725%
39.0	89.698	6.190	2201.541	.266%	99.004%
40.0	38.654	2.725	2204.266	.117%	99.126%
41.0	25.220	1.814	2206.08	.078%	99.208%
42.0	19.275	1.414	2207.494	.061%	99.271%
43.0	16.027	1.199	2208.693	.051%	99.325%
44.0	13.213	1.007	2209.7	.043%	99.370%
45.0	10.800	0.837	2210.537	.036%	99.408%
46.0	9.559	0.754	2211.291	.032%	99.442%
47.0	8.405	0.674	2211.965	.029%	99.472%
48.0	7.483	0.610	2212.575	.026%	99.500%
49.0	6.694	0.554	2213.129	.024%	99.525%
50.0	6.050	0.508	2213.637	.022%	99.547%
51.0	5.539	0.472	2214.109	.020%	99.569%
52.0	5.162	0.446	2214.555	.019%	99.589%
53.0	4.838	0.424	2214.979	.018%	99.608%
54.0	4.617	0.410	2215.389	.018%	99.626%
55.0	4.432	0.398	2215.787	.017%	99.644%
56.0	4.298	0.391	2216.177	.017%	99.662%
57.0	4.217	0.388	2216.565	.017%	99.679%
58.0	4.136	0.385	2216.95	.017%	99.696%
59.0	4.124	0.388	2217.337	.017%	99.714%
60.0	4.054	0.385	2217.723	.017%	99.731%
61.0	4.002	0.384	2218.106	.016%	99.748%
62.0	3.915	0.379	2218.486	.016%	99.766%
63.0	3.851	0.376	2218.862	.016%	99.782%
64.0	3.805	0.375	2219.237	.016%	99.799%
65.0	3.712	0.369	2219.606	.016%	99.816%
66.0	3.556	0.356	2219.962	.015%	99.832%
67.0	3.416	0.345	2220.307	.015%	99.847%
68.0	3.271	0.333	2220.64	.014%	99.862%
69.0	3.074	0.315	2220.954	.014%	99.877%
70.0	2.883	0.297	2221.251	.013%	99.890%
71.0	2.616	0.271	2221.523	.012%	99.902%
72.0	2.355	0.246	2221.768	.011%	99.913%
73.0	2.100	0.220	2221.988	.009%	99.923%
74.0	1.827	0.193	2222.181	.008%	99.932%
75.0	1.618	0.171	2222.352	.007%	99.939%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	1.311	0.139	2222.492	.006%	99.946%
77.0	1.119	0.120	2222.611	.005%	99.951%
78.0	1.044	0.112	2222.723	.005%	99.956%
79.0	0.963	0.104	2222.827	.004%	99.961%
80.0	0.922	0.100	2222.927	.004%	99.965%
81.0	0.887	0.096	2223.023	.004%	99.970%
82.0	0.853	0.093	2223.115	.004%	99.974%
83.0	0.812	0.088	2223.204	.004%	99.978%
84.0	0.783	0.085	2223.289	.004%	99.982%
85.0	0.777	0.085	2223.374	.004%	99.985%
86.0	0.702	0.077	2223.451	.003%	99.989%
87.0	0.696	0.076	2223.527	.003%	99.992%
88.0	0.655	0.072	2223.599	.003%	99.995%
89.0	0.615	0.067	2223.666	.003%	99.998%
90.0	0.609	0.033	2223.7	.001%	100.000%

Zonal flux distribution table

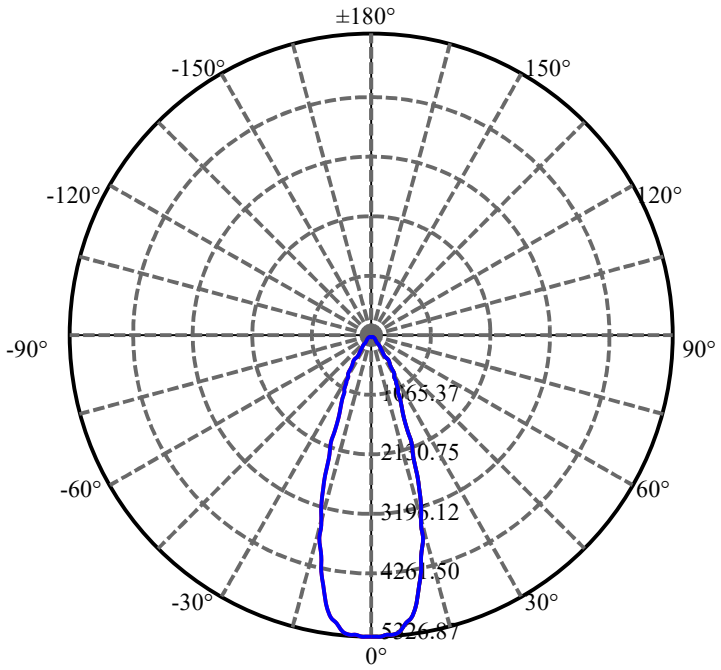
ZONAL LUMEN SUMMARY

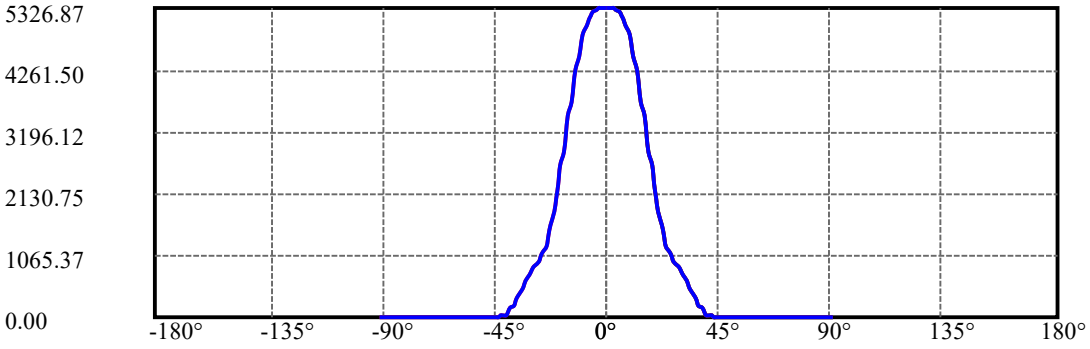
Zone	Lumens	%Lamp	%Fixt
0-30	1990.52	85.47%	89.51%
0-40	2204.27	94.65%	99.13%
0-60	2217.72	95.22%	99.73%
0-90	2223.67	95.48%	100.00%
0-120	2223.67	95.48%	100.00%
0-180	2223.70	95.48%	100.00%
60-90	6.33	0.27%	0.28%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-25.45	1778.96	76.38%	80.00%

ZONAL LUMEN SUMMARY

0-10	532.11
10-20	920.22
20-30	538.18
30-40	213.75
40-50	9.37
50-60	4.09
60-70	3.53
70-80	1.68
80-90	0.74
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):

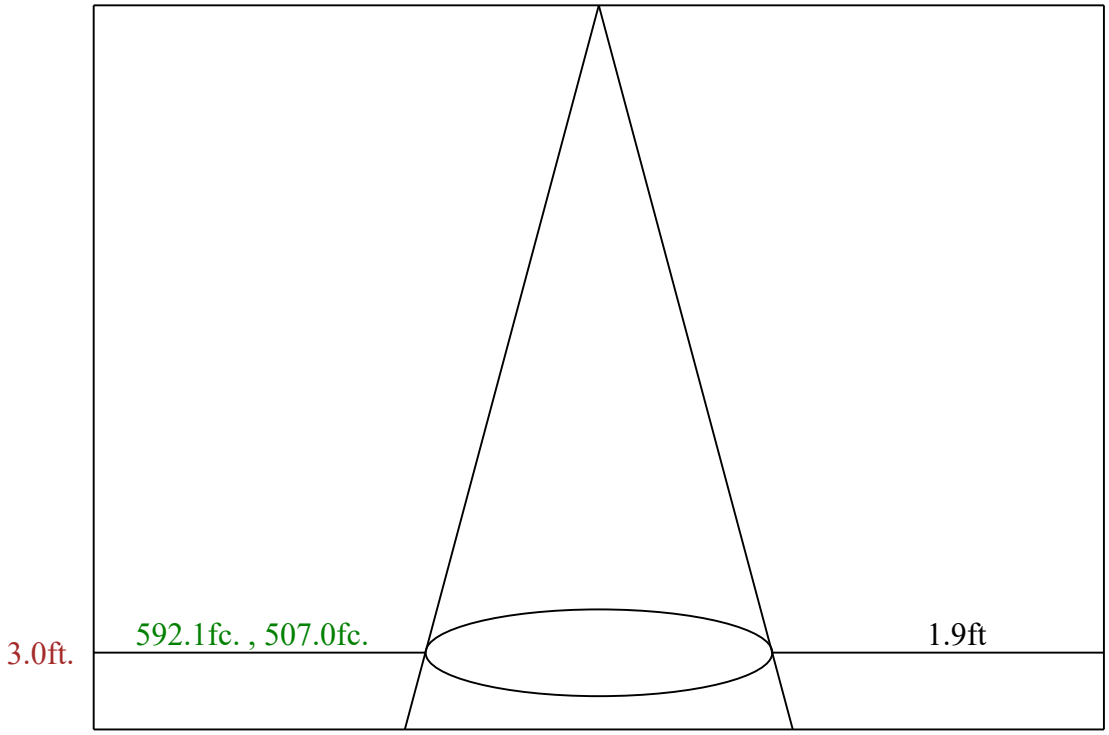
C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:33.1 Right:33.1
:C90/270Left:33.1 Right:33.1

Beam Angle(50%Imax):C0/180Left:17.8 Right:17.8
:C90/270Left:17.8 Right:17.8

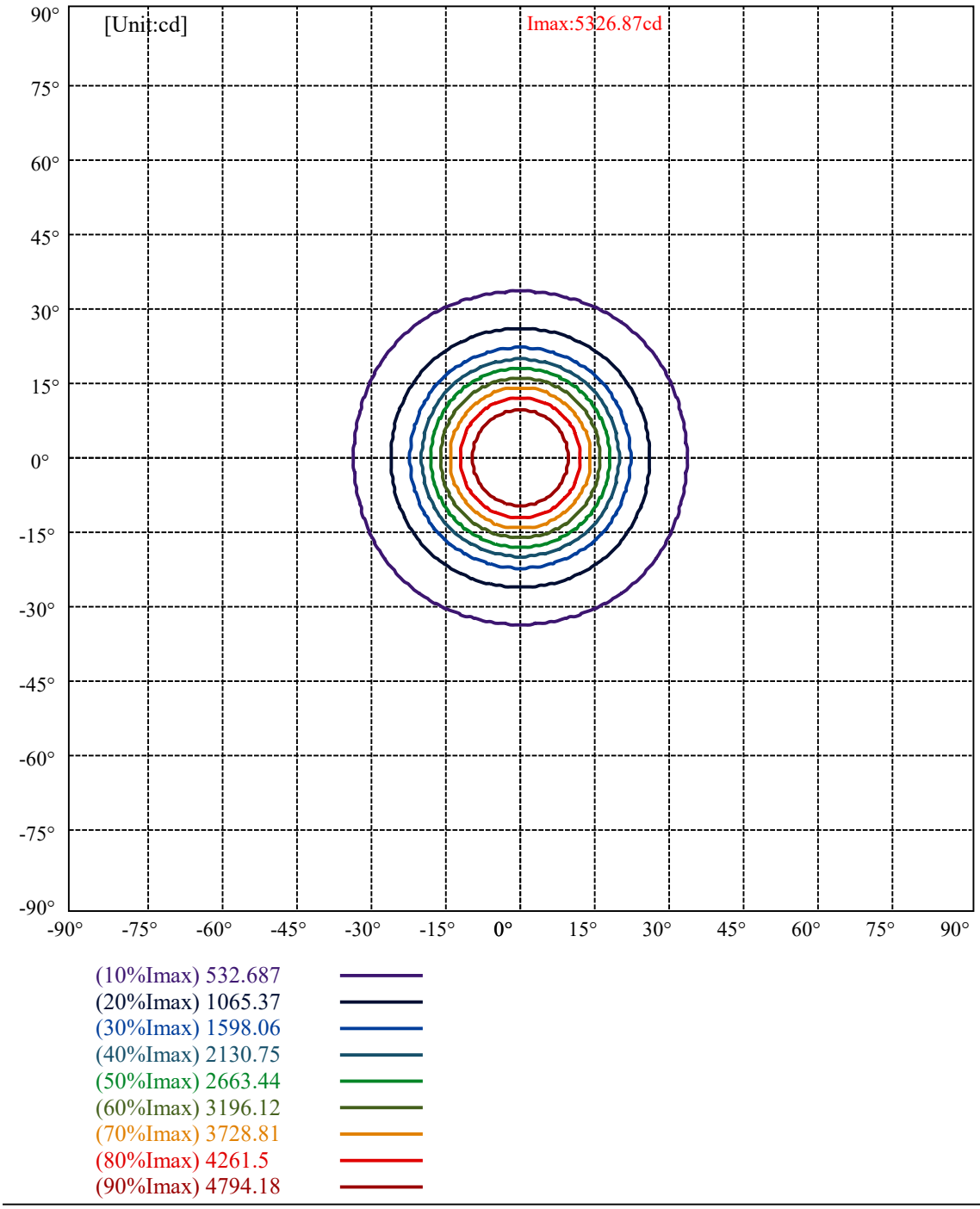
Lux distance Curve



Max , Ave

Beam angle of C0 plane 35.62

ISO-Intensity(V-H)

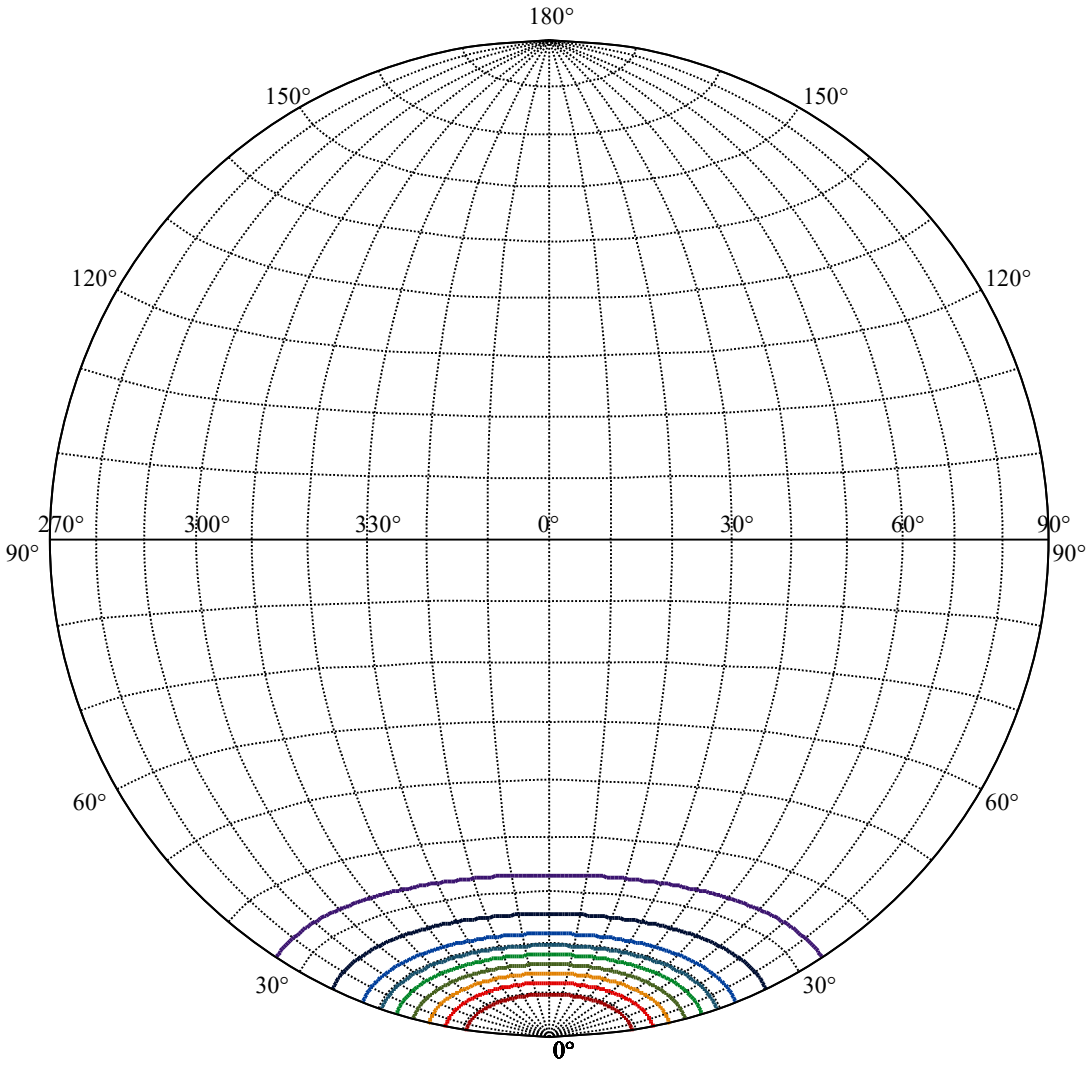


Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2020/9/21
Humidity(%): 60.0%

Operator: NT0100
Distance(feet): 22.35

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:5326.87

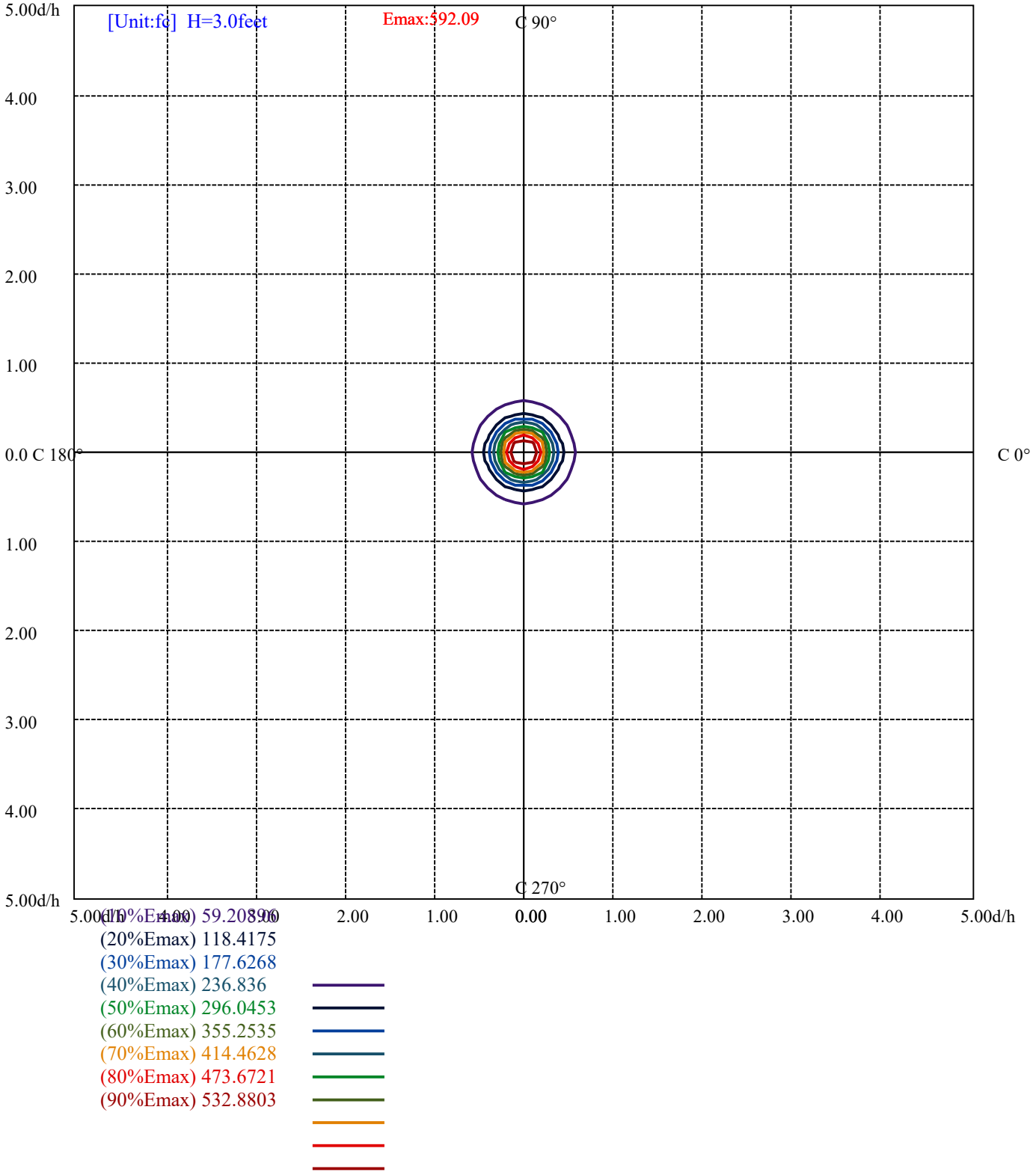
(10%Imax) 532.687
(20%Imax) 1065.37
(30%Imax) 1598.06
(40%Imax) 2130.75
(50%Imax) 2663.44
(60%Imax) 3196.12
(70%Imax) 3728.81
(80%Imax) 4261.5
(90%Imax) 4794.18

Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2020/9/21
Humidity(%): 60.0%

Operator: NT0100
Distance(feet): 22.35

ISO illuminance diagram

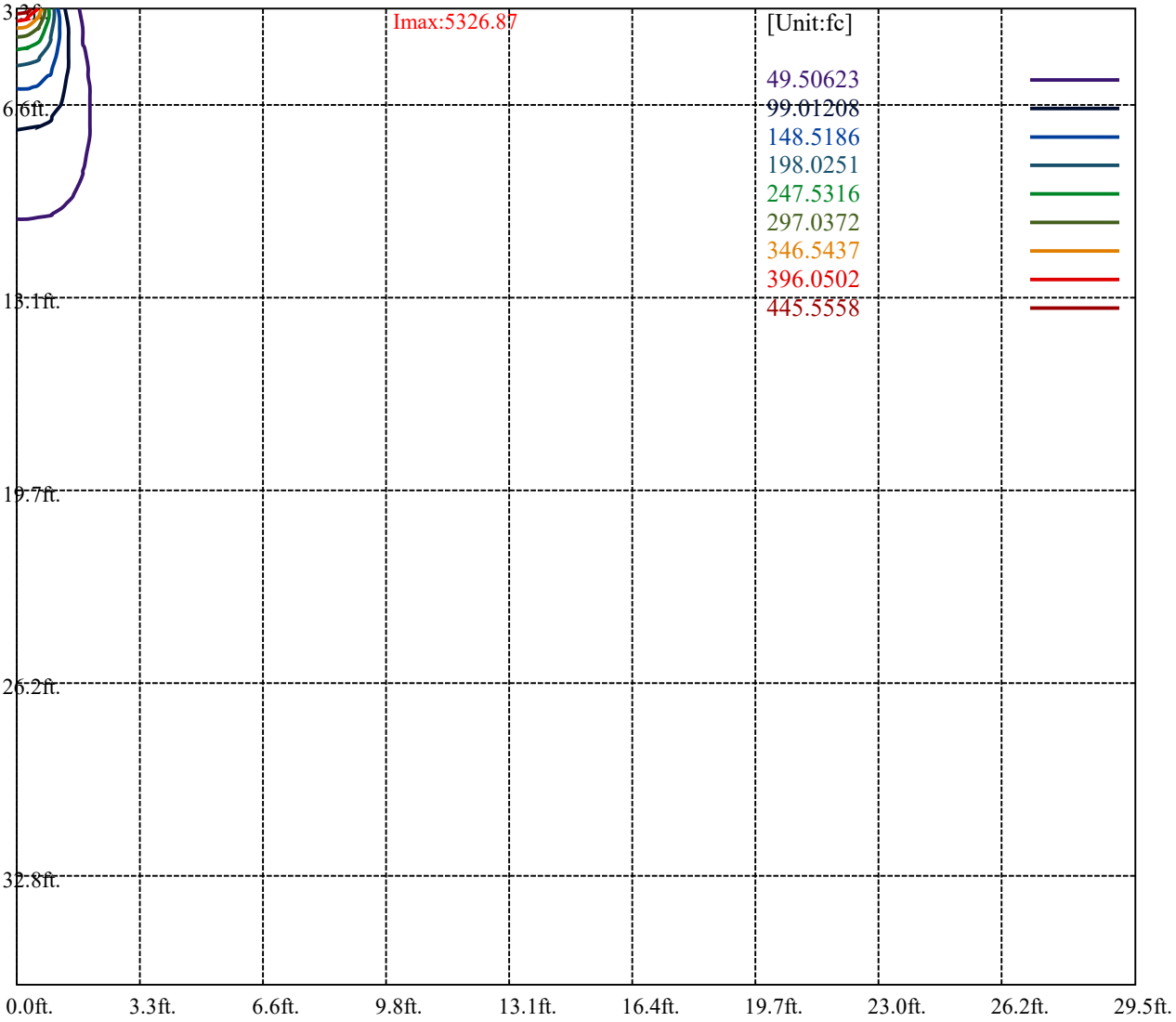


Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2020/9/21
Humidity(%): 60.0%

Operator: NT0100
Distance(feet): 22.35

Space ISO Lux diagram



Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2020/9/21
Humidity(%): 60.0%

Operator: NT0100
Distance(feet): 22.35

Nata 3-2547-M

Luminance Limitting Curve(no luminous side)

Luminance Table

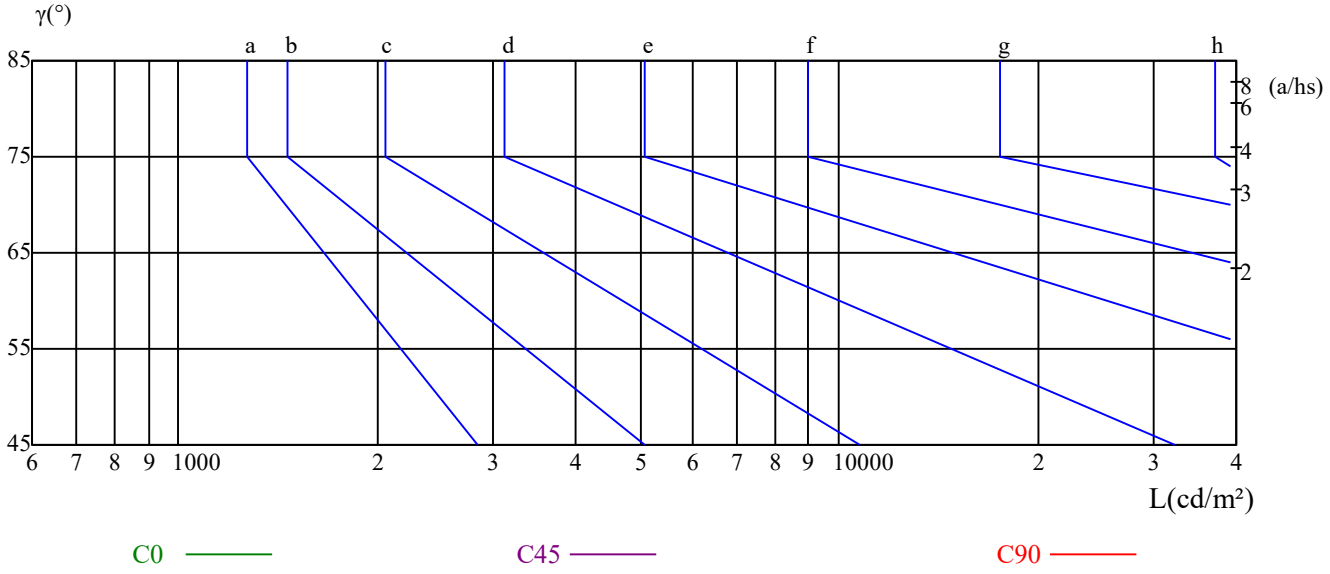
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

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

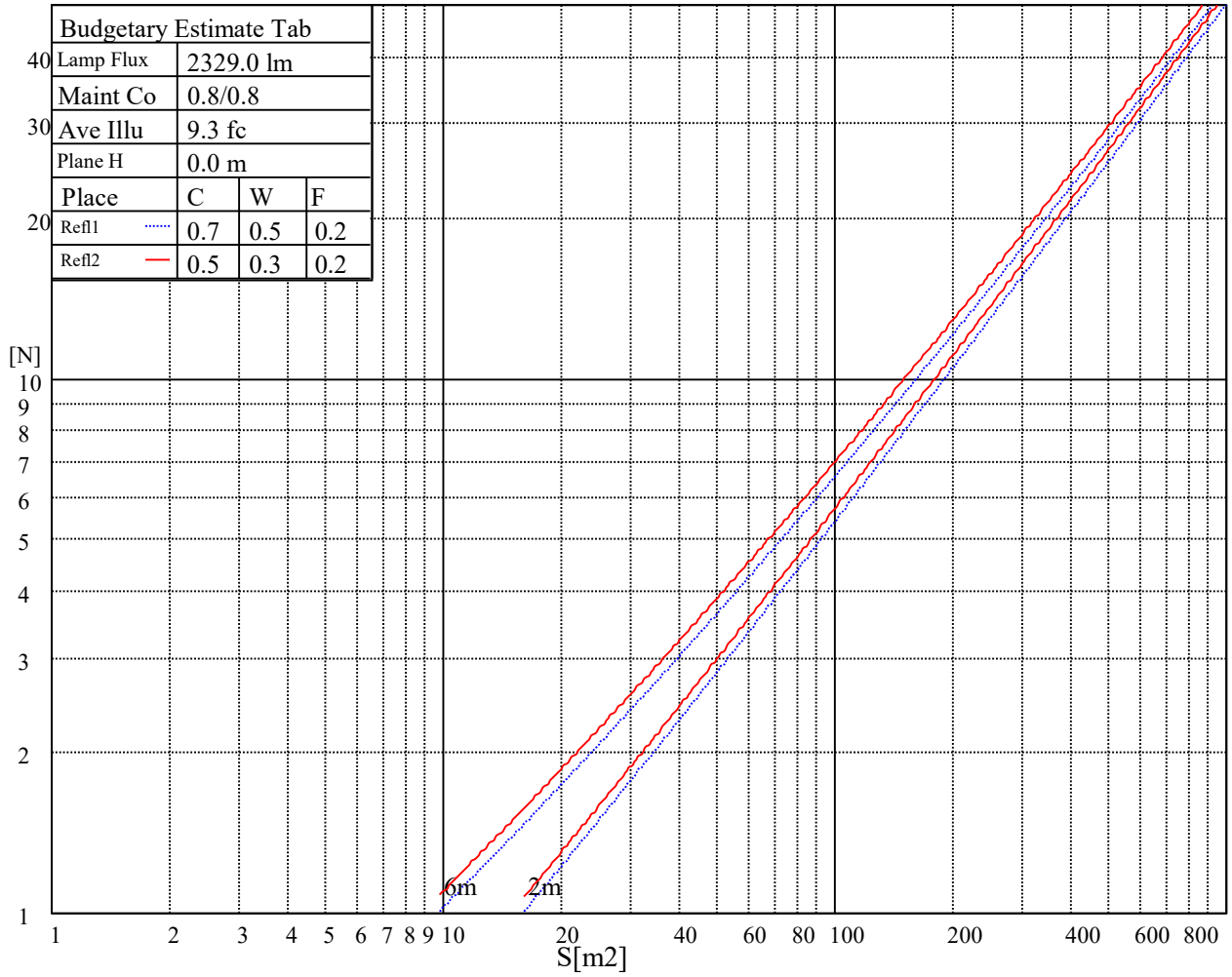


Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2020/9/21
Humidity(%): 60.0%

Operator: NT0100
Distance(feet): 22.35

Budgetary Estimate Table



Equipment: GMS 1800
Temperature(°C): 25.0

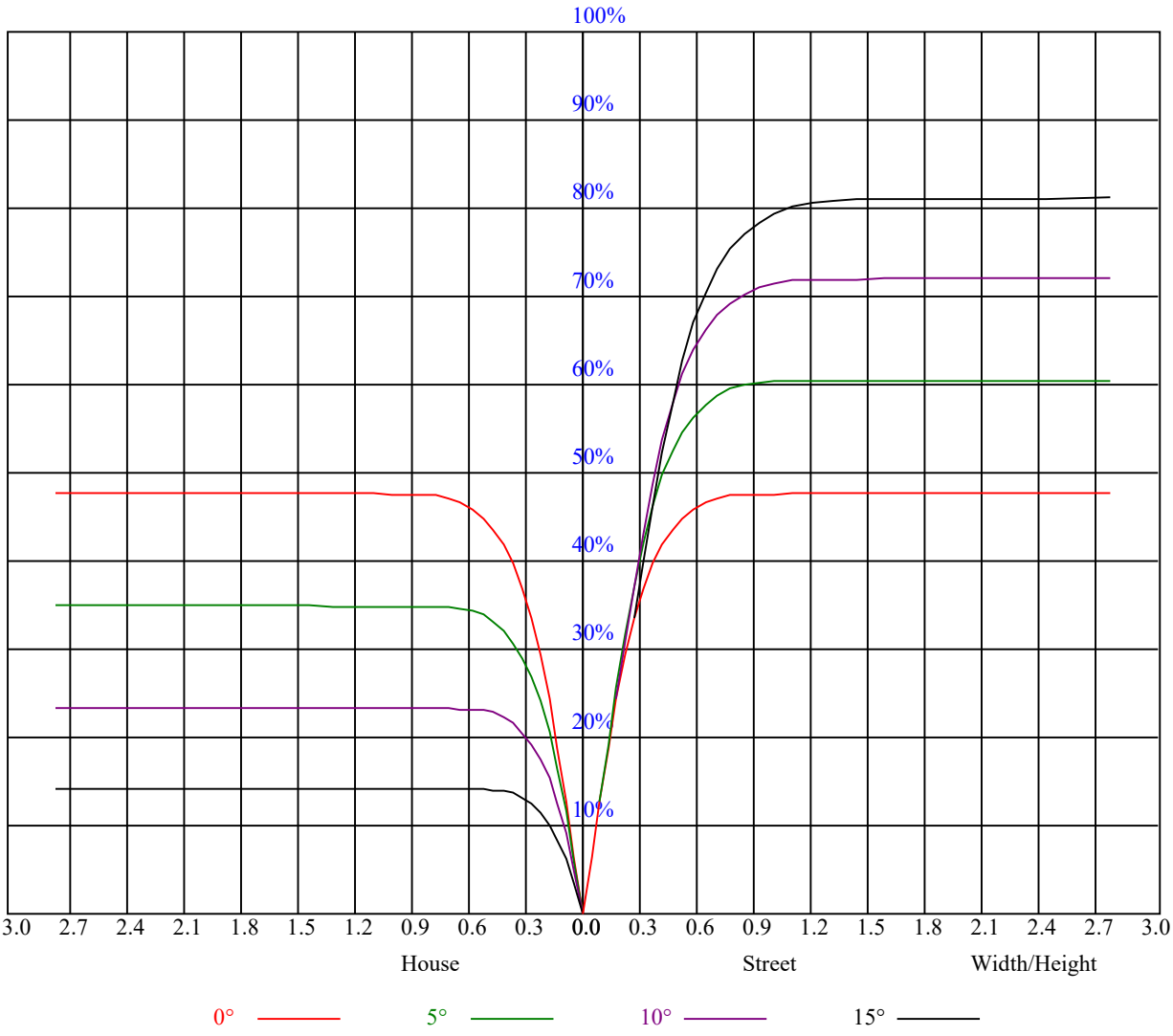
Date: 2020/9/21
Humidity(%): 60.0%

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	1.14	1.14	1.14	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	0.97	0.97	0.97	0.96
1	1.07	1.05	1.03	1.05	1.03	1.02	1.01	1.00	0.99	0.98	0.97	0.96	0.94	0.94	0.93	0.91
2	1.01	0.98	0.95	1.00	0.97	0.94	0.97	0.94	0.92	0.94	0.92	0.90	0.91	0.90	0.89	0.87
3	0.96	0.92	0.89	0.95	0.91	0.89	0.93	0.90	0.87	0.90	0.88	0.86	0.88	0.86	0.85	0.83
4	0.92	0.87	0.84	0.91	0.87	0.84	0.89	0.85	0.83	0.87	0.84	0.82	0.85	0.83	0.81	0.80
5	0.88	0.83	0.80	0.87	0.83	0.79	0.85	0.81	0.79	0.84	0.80	0.78	0.82	0.80	0.77	0.76
6	0.84	0.79	0.76	0.83	0.79	0.76	0.82	0.78	0.75	0.80	0.77	0.75	0.79	0.76	0.74	0.73
7	0.80	0.76	0.73	0.80	0.75	0.72	0.79	0.75	0.72	0.78	0.74	0.72	0.77	0.74	0.71	0.70
8	0.77	0.73	0.69	0.77	0.72	0.69	0.76	0.72	0.69	0.75	0.71	0.69	0.74	0.71	0.68	0.67
9	0.74	0.70	0.67	0.74	0.69	0.67	0.73	0.69	0.66	0.72	0.69	0.66	0.71	0.68	0.66	0.65
10	0.71	0.67	0.64	0.71	0.67	0.64	0.70	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.64	0.63

Coefficient Utilization Curve



Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2020/9/21
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	5319.45	5312.02	5289.29	5262.84	5220.61	5161.21	5074.44	4961.68	4818.29
45.0	5335.69	5317.59	5311.56	5271.65	5230.35	5195.09	5084.65	5017.83	4891.14
90.0	5322.23	5311.56	5294.85	5266.55	5226.64	5146.83	5057.27	4933.84	4783.49
135.0	5330.12	5328.73	5331.98	5335.22	5328.73	5316.66	5285.11	5234.99	5151.93
180.0	5319.45	5331.98	5337.54	5349.61	5349.15	5342.65	5316.66	5286.04	5220.14
225.0	5335.69	5340.33	5350.07	5348.22	5333.83	5312.49	5260.05	5185.81	5065.62
270.0	5322.23	5334.30	5339.86	5345.43	5351.93	5345.90	5325.48	5305.99	5254.48
315.0	5330.12	5323.62	5330.12	5330.12	5318.98	5290.68	5245.20	5183.02	5081.40
360.0	5319.45	5312.02	5289.29	5262.84	5220.61	5161.21	5074.44	4961.68	4818.29

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	4640.10	4431.29	4203.45	3951.94	3695.33	3430.83	3274.92	2910.65	2648.47
45.0	4740.80	4551.01	4334.77	4102.29	3854.96	3609.95	3356.12	3103.22	2855.89
90.0	4592.31	4372.36	4129.20	3865.17	3589.53	3315.29	3148.70	2749.17	2469.35
135.0	5033.60	4869.33	4656.34	4398.34	4113.42	3807.16	3484.66	3153.34	2823.88
180.0	5114.81	4964.93	4775.14	4544.05	4287.90	4004.84	3722.71	3426.65	3132.92
225.0	4914.35	4721.77	4499.96	4245.67	3970.50	3688.83	3459.14	3115.29	2839.65
270.0	5178.38	5060.05	4899.96	4697.64	4455.42	4179.32	3886.05	3582.57	3274.92
315.0	4943.12	4767.71	4544.51	4282.80	4004.38	3702.29	3388.14	3076.77	2764.02
360.0	4640.10	4431.29	4203.45	3951.94	3695.33	3430.83	3274.92	2910.65	2648.47

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	2494.41	2131.54	1982.58	1747.78	1543.61	1376.09	1244.31	1140.36	1055.91
45.0	2616.45	2375.16	2134.79	1903.70	1689.78	1574.70	1367.27	1295.81	1195.12
90.0	2298.13	1906.95	1653.58	1514.84	1316.69	1168.20	1057.76	915.26	915.26
135.0	2507.40	2199.29	1903.23	1628.99	1395.12	1239.20	1063.80	980.73	906.49
180.0	2847.54	2576.55	2302.30	2050.33	1805.79	1588.15	1408.57	1265.65	1177.48
225.0	2627.13	2315.29	2110.19	1874.00	1664.26	1484.21	1335.26	1224.82	1134.79
270.0	2968.19	2660.54	2363.55	2070.75	1793.26	1640.59	1339.90	1234.10	1102.31
315.0	2583.04	2153.81	1861.47	1693.95	1449.41	1244.77	1095.81	906.30	906.30
360.0	2494.41	2131.54	1982.58	1747.78	1543.61	1376.09	1244.31	1140.36	1055.91

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	905.65	905.65	850.71	754.80	657.02	595.40	457.72	362.46	306.31
45.0	1109.27	1039.20	975.63	908.35	812.75	710.20	604.40	499.53	401.62
90.0	858.88	814.10	745.19	664.36	572.06	480.65	408.30	304.31	237.40
135.0	852.66	811.83	777.95	741.29	676.33	602.08	514.85	430.39	346.40
180.0	1071.22	996.98	948.72	897.67	837.35	749.65	654.98	555.22	460.09
225.0	1059.16	922.87	910.76	883.98	791.50	693.59	589.46	485.10	426.35
270.0	971.45	927.83	871.22	827.60	787.70	725.05	645.24	557.54	469.37
315.0	852.15	811.97	777.12	727.05	654.47	573.96	486.35	399.39	349.46
360.0	905.65	905.65	850.71	754.80	657.02	595.40	457.72	362.46	306.31

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	216.84	136.19	69.61	35.96	26.73	20.93	16.38	13.36	10.90
45.0	304.64	233.18	233.18	62.55	42.32	38.00	28.58	25.48	21.16
90.0	156.70	88.31	35.54	17.73	14.57	11.65	9.61	7.75	6.77
135.0	263.80	247.56	157.21	49.65	26.68	14.90	11.32	8.35	7.05
180.0	366.82	277.72	260.55	162.92	56.84	34.80	28.63	25.20	20.46
225.0	331.46	242.55	158.47	89.88	52.90	41.58	34.43	28.21	23.94
270.0	381.67	296.29	246.17	246.17	69.84	26.59	15.36	12.81	9.79
315.0	267.65	155.45	111.28	52.71	19.35	13.32	9.88	7.05	5.61
360.0	216.84	136.19	69.61	35.96	26.73	20.93	16.38	13.36	10.90

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	9.33	8.17	7.24	6.40	5.71	5.29	4.92	4.59	4.32
45.0	16.66	15.22	13.09	11.37	9.88	8.58	7.61	6.87	6.26
90.0	6.03	5.38	4.78	4.36	4.04	3.76	3.53	3.43	3.34
135.0	5.61	4.92	4.32	3.90	3.48	3.16	2.97	2.92	2.83
180.0	16.24	14.80	13.09	11.65	10.49	9.47	8.63	7.89	7.29
225.0	20.32	17.63	15.45	13.64	12.06	10.67	9.61	8.82	8.07
270.0	7.66	6.26	5.57	5.10	4.78	4.55	4.22	4.08	4.04
315.0	4.55	4.08	3.71	3.43	3.11	2.92	2.83	2.69	2.55
360.0	9.33	8.17	7.24	6.40	5.71	5.29	4.92	4.59	4.32

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	4.22	4.18	4.04	4.04	3.94	3.90	3.81	3.71	3.57
45.0	5.75	5.29	5.06	4.92	4.78	4.73	4.50	4.41	4.32
90.0	3.25	3.29	3.29	3.34	3.39	3.48	3.39	3.48	3.53
135.0	2.78	2.78	2.97	2.97	3.06	3.16	3.34	3.39	3.43
180.0	6.87	6.54	6.22	5.89	5.71	5.71	5.52	5.38	5.15
225.0	7.56	6.96	6.59	6.31	5.94	5.80	5.57	5.34	5.15
270.0	3.99	3.90	3.81	3.81	3.81	3.76	3.81	3.85	3.71
315.0	2.51	2.51	2.41	2.46	2.46	2.46	2.51	2.46	2.46
360.0	4.22	4.18	4.04	4.04	3.94	3.90	3.81	3.71	3.57

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	3.48	3.48	3.39	3.20	3.02	2.92	2.74	2.51	2.18
45.0	4.18	4.18	4.04	3.90	3.81	3.57	3.39	3.20	2.88
90.0	3.48	3.43	3.39	3.25	3.06	2.92	2.78	2.55	2.32
135.0	3.48	3.48	3.43	3.34	3.34	3.25	3.06	2.88	2.74
180.0	5.06	4.97	4.87	4.55	4.36	4.18	3.85	3.57	3.25
225.0	4.92	4.78	4.64	4.32	3.99	3.81	3.57	3.34	2.88
270.0	3.71	3.57	3.48	3.48	3.34	3.16	2.92	2.83	2.69
315.0	2.51	2.55	2.46	2.41	2.41	2.37	2.27	2.18	2.00
360.0	3.48	3.48	3.39	3.20	3.02	2.92	2.74	2.51	2.18

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	1.95	1.76	1.58	1.21	1.07	1.02	1.02	0.93	0.88
45.0	2.55	2.23	1.95	1.76	1.44	1.21	1.16	1.11	1.07
90.0	2.09	1.95	1.62	1.48	1.16	1.11	1.07	0.97	0.93
135.0	2.46	2.18	1.90	1.72	1.44	1.11	1.11	1.07	1.07
180.0	2.92	2.55	2.23	1.95	1.62	1.30	1.07	0.97	0.88
225.0	2.60	2.27	1.90	1.76	1.25	1.11	1.02	0.88	0.88
270.0	2.37	2.13	1.90	1.72	1.39	1.11	0.97	0.84	0.79
315.0	1.90	1.72	1.53	1.35	1.11	0.97	0.93	0.93	0.88
360.0	1.95	1.76	1.58	1.21	1.07	1.02	1.02	0.93	0.88

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	0.88	0.84	0.79	0.79	0.84	0.70	0.70	0.60	0.60
45.0	0.97	0.97	0.97	0.88	0.84	0.74	0.70	0.70	0.65
90.0	0.93	0.88	0.84	0.79	0.84	0.74	0.74	0.70	0.65
135.0	0.97	0.97	0.97	0.93	0.97	0.88	0.88	0.79	0.74
180.0	0.84	0.84	0.74	0.74	0.74	0.65	0.60	0.60	0.60
225.0	0.84	0.79	0.74	0.74	0.65	0.60	0.60	0.60	0.56
270.0	0.79	0.74	0.65	0.65	0.65	0.60	0.60	0.56	0.51
315.0	0.88	0.79	0.79	0.74	0.70	0.70	0.74	0.70	0.60
360.0	0.88	0.84	0.79	0.79	0.84	0.70	0.70	0.60	0.60

Intensity data(cd)

C/γ(°)	90.0
0.0	0.56
45.0	0.65
90.0	0.56
135.0	0.84
180.0	0.51
225.0	0.56
270.0	0.56
315.0	0.65
360.0	0.56