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Nata

LumCAT: 3-2545-M
Luminaire: 92.70.131.00
Report No: 200921-B046
Test No: 200921-C046
LampCAT: LUMINUS CXM-14-AC40
Lamp flux(lm): 2101.3
Number of Lamps: 1
Length(feet)(ft.):0.000
Phm Type: C

Voltage(V): 230.8000
Current(A): 0.0890
Power (W): 19.6000
PF: 0.9530
Ballast type: AC
Width(feet)(ft.):0.000
Height(feet)(ft.):0.000

Photometric Results

Lumens(lm): 2016.68
Efficiency(%): 95.97%
Lumens(lm)/Power(W): 102.89
Central intensity(cd): 13153.490
Maximum intensity(cd): 13153.490
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=17.0
[C90/270]Total=17.0
Field angle(10%Imax): [C0/180]Total=37.1
[C90/270]Total=37.1
Maximum s/h(1/2): C0_180=0.29 C90_270=0.29
Maximum s/h(1/4): C0_180=0.30 C90_270=0.30
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 96.12%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 99.656%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	13153.492	3.147	3.147	.150%	.156%
1.0	13047.344	24.971	28.118	1.188%	1.394%
2.0	12614.053	48.275	76.393	2.297%	3.788%
3.0	11731.113	67.327	143.72	3.204%	7.127%
4.0	11080.742	84.763	228.483	4.034%	11.330%
5.0	10357.313	98.991	327.474	4.711%	16.238%
6.0	9326.115	106.902	434.376	5.087%	21.539%
7.0	8091.003	108.131	542.507	5.146%	26.901%
8.0	7078.424	108.030	650.536	5.141%	32.258%
9.0	6023.096	103.325	753.861	4.917%	37.381%
10.0	4946.016	94.184	848.045	4.482%	42.052%
11.0	4070.849	85.180	933.225	4.054%	46.275%
12.0	3449.683	78.652	1011.877	3.743%	50.175%
13.0	2844.003	70.157	1082.034	3.339%	53.654%
14.0	2452.736	65.070	1147.103	3.097%	56.881%
15.0	2099.664	59.593	1206.696	2.836%	59.836%
16.0	1880.757	56.849	1263.545	2.705%	62.655%
17.0	1697.550	54.426	1317.972	2.590%	65.354%
18.0	1418.840	48.080	1366.052	2.288%	67.738%
19.0	1237.380	44.177	1410.229	2.102%	69.928%
20.0	1120.484	42.025	1452.254	2.000%	72.012%
21.0	1037.393	40.768	1493.023	1.940%	74.034%
22.0	950.880	39.062	1532.085	1.859%	75.971%
23.0	879.367	37.679	1569.764	1.793%	77.839%
24.0	829.599	37.003	1606.766	1.761%	79.674%
25.0	784.646	36.364	1643.131	1.731%	81.477%
26.0	750.301	36.069	1679.199	1.716%	83.266%
27.0	721.717	35.931	1715.13	1.710%	85.047%
28.0	691.642	35.608	1750.737	1.695%	86.813%
29.0	659.908	35.084	1785.821	1.670%	88.553%
30.0	621.544	34.080	1819.901	1.622%	90.242%
31.0	574.659	32.456	1852.357	1.545%	91.852%
32.0	524.143	30.459	1882.816	1.450%	93.362%
33.0	462.514	27.624	1910.44	1.315%	94.732%
34.0	383.640	23.525	1933.965	1.120%	95.898%
35.0	323.727	20.362	1954.327	.969%	96.908%
36.0	260.433	16.787	1971.114	.799%	97.741%
37.0	181.785	11.997	1983.111	.571%	98.335%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	136.664	9.227	1992.338	.439%	98.793%
39.0	98.242	6.780	1999.117	.323%	99.129%
40.0	45.330	3.195	2002.313	.152%	99.288%
41.0	24.977	1.797	2004.11	.086%	99.377%
42.0	11.328	0.831	2004.941	.040%	99.418%
43.0	9.078	0.679	2005.62	.032%	99.452%
44.0	7.755	0.591	2006.211	.028%	99.481%
45.0	6.723	0.521	2006.732	.025%	99.507%
46.0	6.328	0.499	2007.231	.024%	99.531%
47.0	6.050	0.485	2007.716	.023%	99.556%
48.0	5.760	0.469	2008.186	.022%	99.579%
49.0	5.481	0.454	2008.639	.022%	99.601%
50.0	5.203	0.437	2009.076	.021%	99.623%
51.0	4.988	0.425	2009.502	.020%	99.644%
52.0	4.791	0.414	2009.916	.020%	99.665%
53.0	4.553	0.399	2010.314	.019%	99.684%
54.0	4.362	0.387	2010.701	.018%	99.704%
55.0	4.165	0.374	2011.075	.018%	99.722%
56.0	3.991	0.363	2011.438	.017%	99.740%
57.0	3.822	0.352	2011.79	.017%	99.758%
58.0	3.712	0.345	2012.135	.016%	99.775%
59.0	3.573	0.336	2012.471	.016%	99.791%
60.0	3.387	0.322	2012.793	.015%	99.807%
61.0	3.225	0.309	2013.102	.015%	99.823%
62.0	2.976	0.288	2013.39	.014%	99.837%
63.0	2.767	0.270	2013.66	.013%	99.850%
64.0	2.593	0.256	2013.916	.012%	99.863%
65.0	2.459	0.244	2014.16	.012%	99.875%
66.0	2.343	0.235	2014.395	.011%	99.887%
67.0	2.251	0.227	2014.622	.011%	99.898%
68.0	2.111	0.215	2014.837	.010%	99.909%
69.0	1.955	0.200	2015.037	.010%	99.919%
70.0	1.781	0.183	2015.221	.009%	99.928%
71.0	1.578	0.164	2015.384	.008%	99.936%
72.0	1.322	0.138	2015.522	.007%	99.943%
73.0	1.108	0.116	2015.638	.006%	99.948%
74.0	0.940	0.099	2015.737	.005%	99.953%
75.0	0.783	0.083	2015.82	.004%	99.957%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	0.667	0.071	2015.891	.003%	99.961%
77.0	0.690	0.074	2015.965	.004%	99.965%
78.0	0.684	0.073	2016.038	.003%	99.968%
79.0	0.615	0.066	2016.105	.003%	99.971%
80.0	0.580	0.063	2016.167	.003%	99.975%
81.0	0.563	0.061	2016.228	.003%	99.978%
82.0	0.539	0.059	2016.287	.003%	99.980%
83.0	0.476	0.052	2016.338	.002%	99.983%
84.0	0.464	0.051	2016.389	.002%	99.986%
85.0	0.452	0.049	2016.439	.002%	99.988%
86.0	0.458	0.050	2016.489	.002%	99.991%
87.0	0.487	0.053	2016.542	.003%	99.993%
88.0	0.534	0.058	2016.6	.003%	99.996%
89.0	0.487	0.053	2016.654	.003%	99.999%
90.0	0.476	0.026	2016.68	.001%	100.000%

Zonal flux distribution table

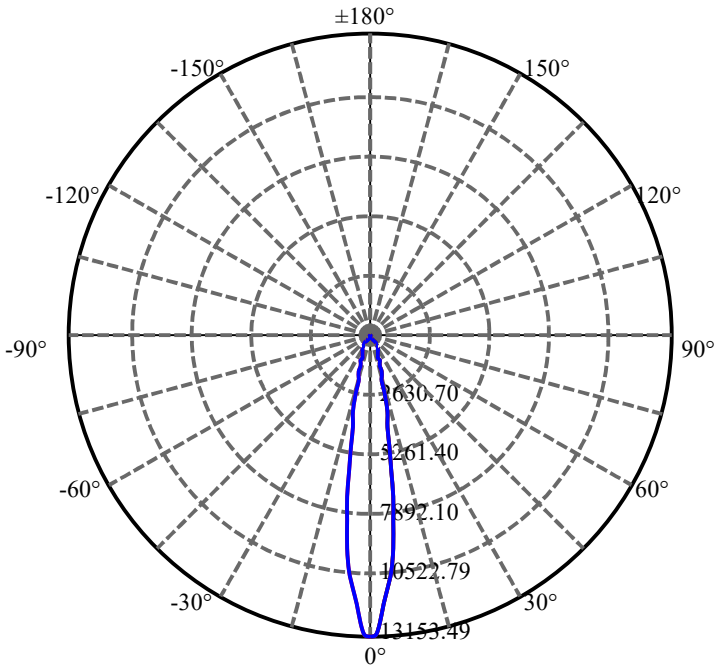
ZONAL LUMEN SUMMARY

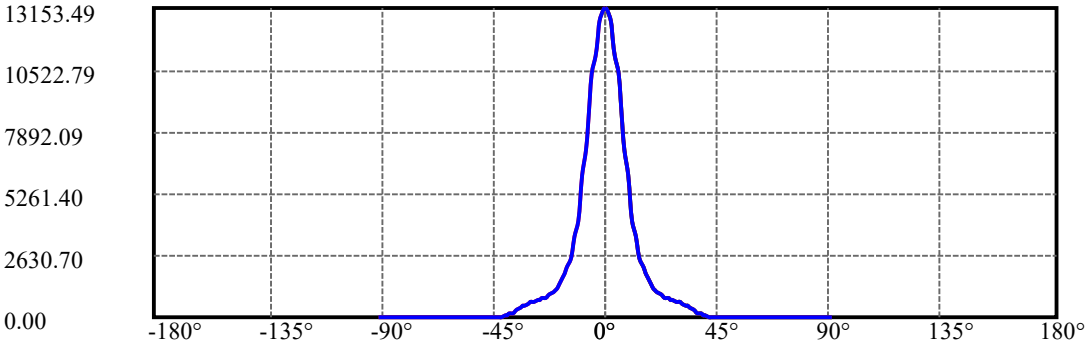
Zone	Lumens	%Lamp	%Fixt
0-30	1819.90	86.61%	90.24%
0-40	2002.31	95.29%	99.29%
0-60	2012.79	95.79%	99.81%
0-90	2016.65	95.97%	100.00%
0-120	2016.65	95.97%	100.00%
0-180	2016.68	95.97%	100.00%
60-90	4.18	0.20%	0.21%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-24.18	1613.34	76.78%	80.00%

ZONAL LUMEN SUMMARY

0-10	848.05
10-20	604.21
20-30	367.65
30-40	182.41
40-50	6.76
50-60	3.72
60-70	2.43
70-80	0.95
80-90	0.49
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):

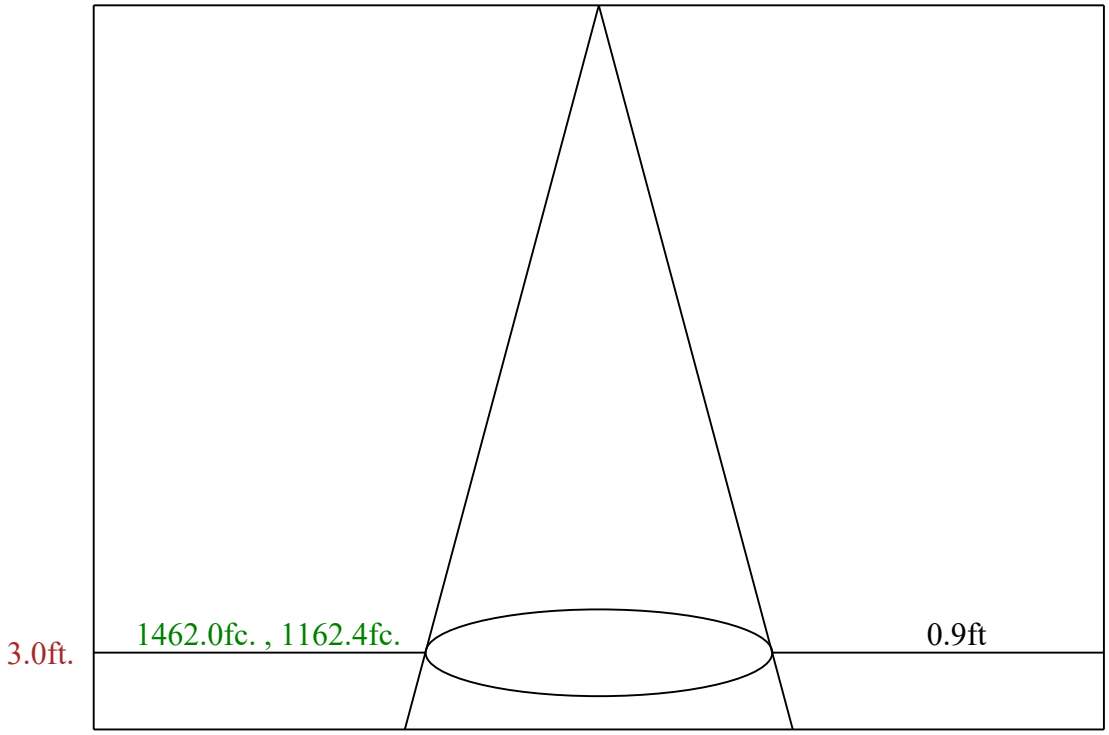
C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:18.6 Right:18.6
:C90/270Left:18.6 Right:18.6

Beam Angle(50%Imax):C0/180Left:8.5 Right:8.5
:C90/270Left:8.5 Right:8.5

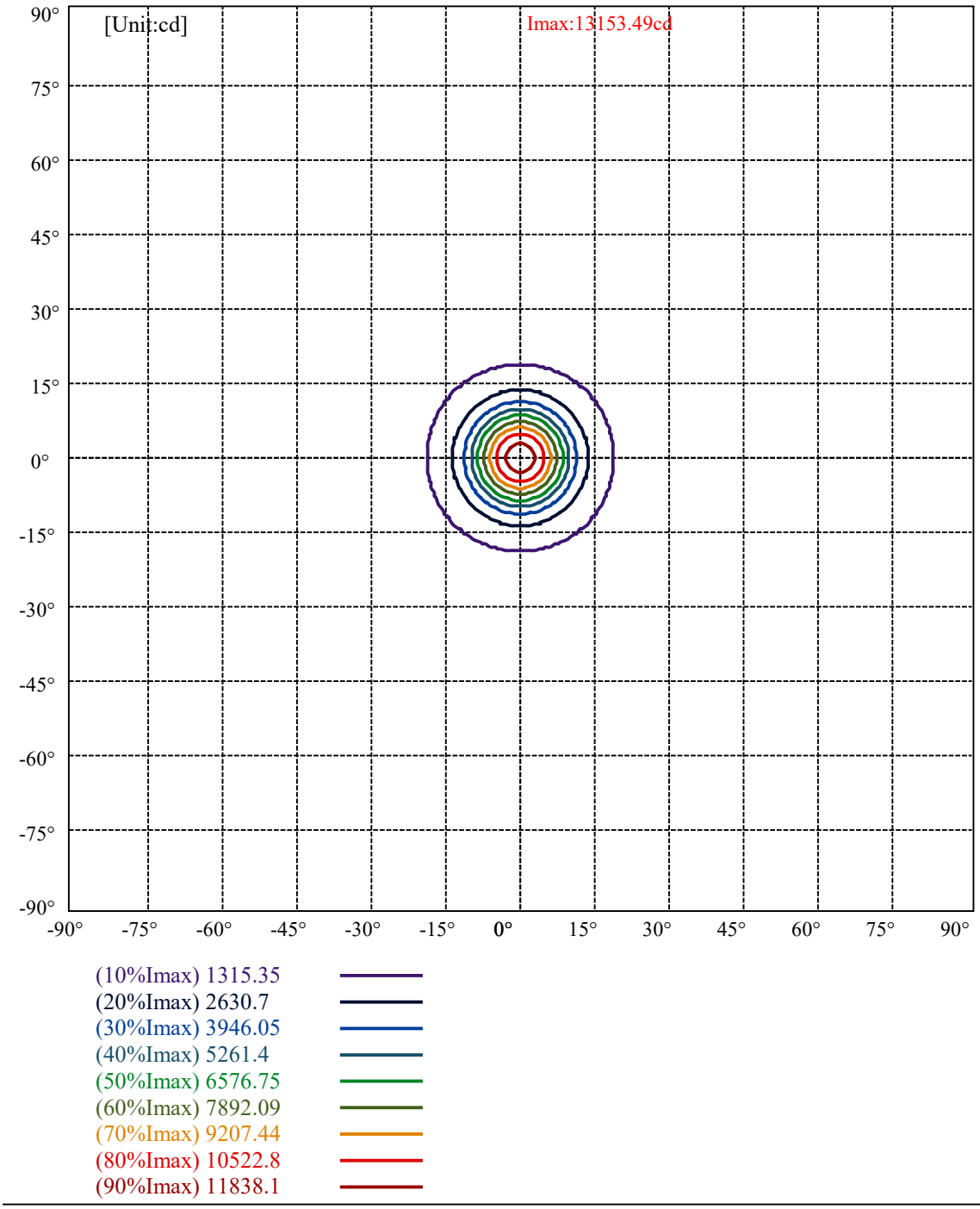
Lux distance Curve



Max , Ave

Beam angle of C0 plane 17.05

ISO-Intensity(V-H)



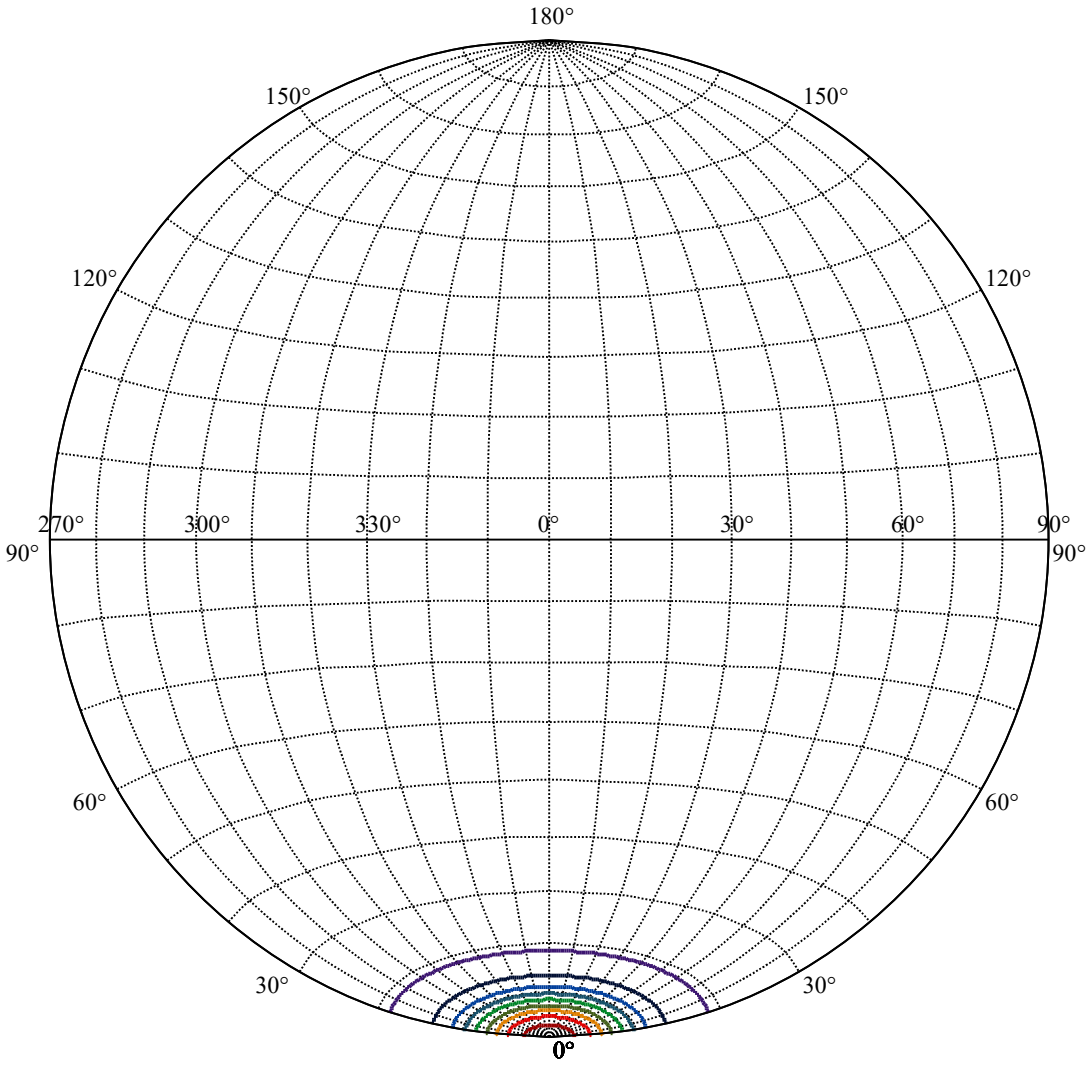
(10%Imax) 1315.35
(20%Imax) 2630.7
(30%Imax) 3946.05
(40%Imax) 5261.4
(50%Imax) 6576.75
(60%Imax) 7892.09
(70%Imax) 9207.44
(80%Imax) 10522.8
(90%Imax) 11838.1

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:13153.49

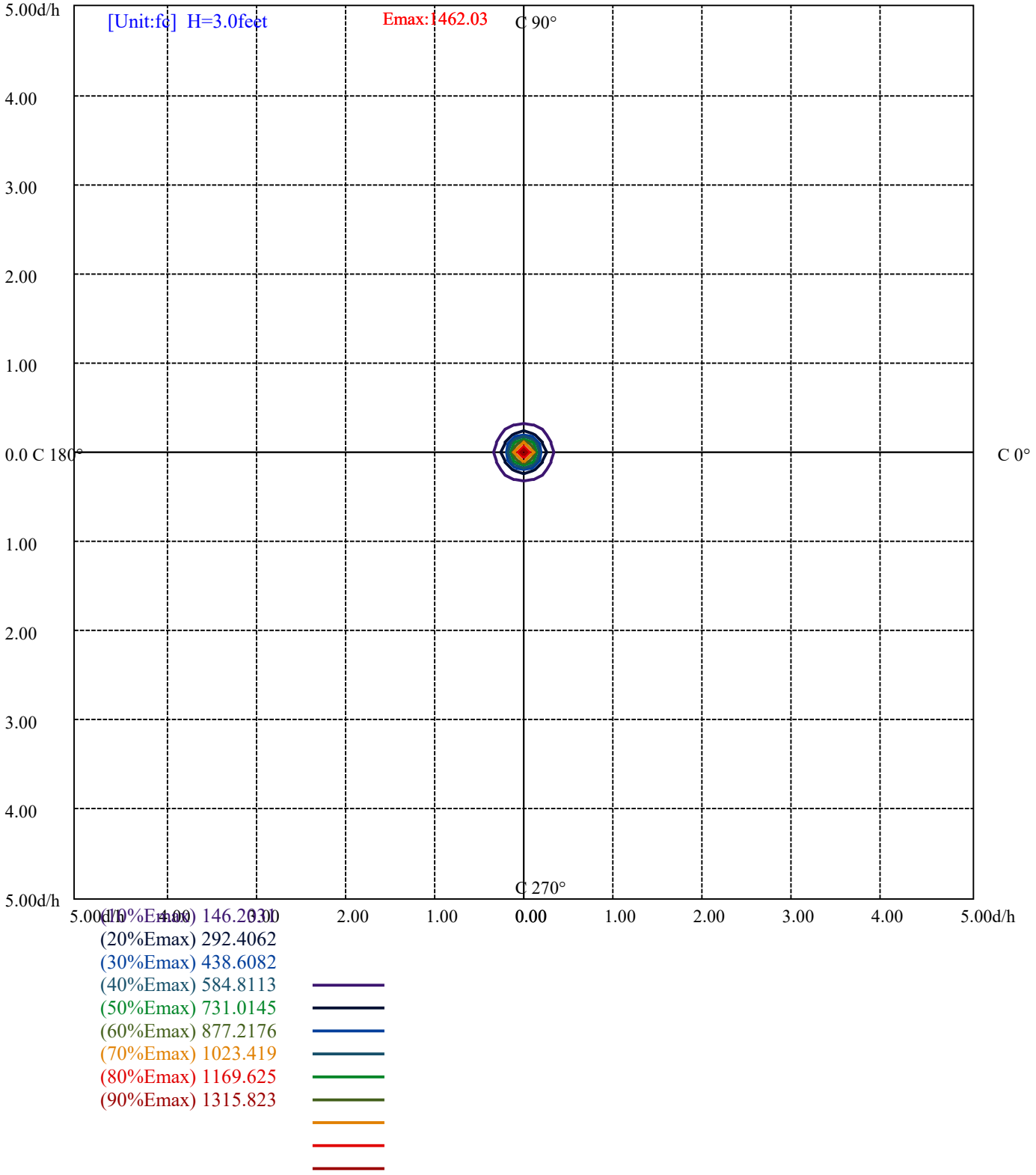
(10%Imax) 1315.35
(20%Imax) 2630.7
(30%Imax) 3946.05
(40%Imax) 5261.4
(50%Imax) 6576.75
(60%Imax) 7892.09
(70%Imax) 9207.44
(80%Imax) 10522.8
(90%Imax) 11838.1

Equipment: GMS 1800
Temperature(°C): 25.0

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

Operator: NT0100
Distance(feet): 22.35

ISO illuminance diagram

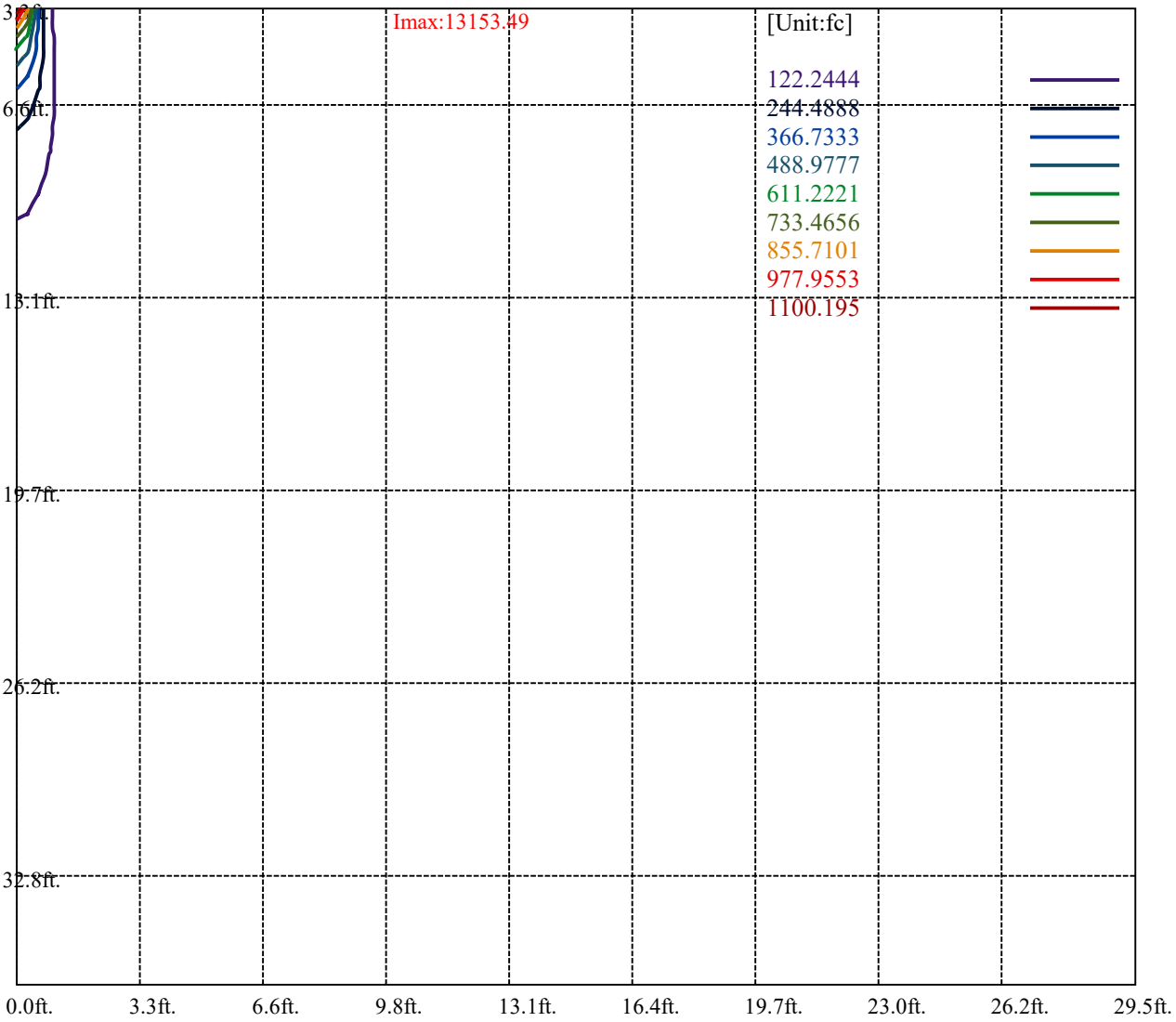


Equipment: GMS 1800
Temperature(°C): 25.0

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 3-2545-M

Luminance Limitting Curve(no luminous side)

Luminance Table

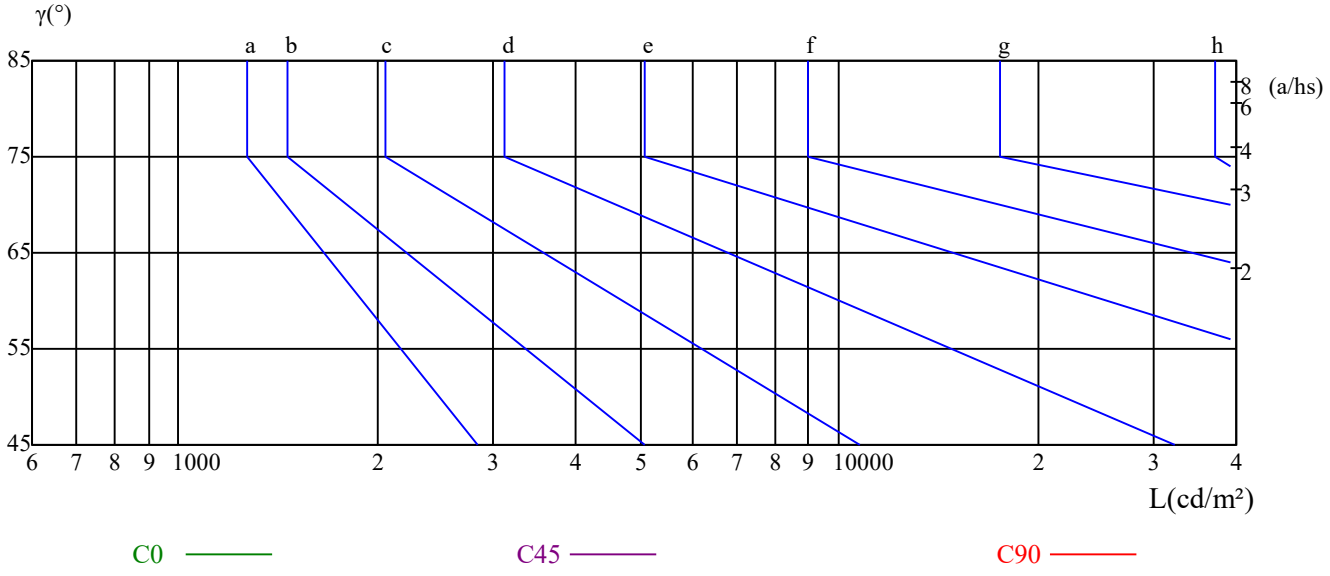
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

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

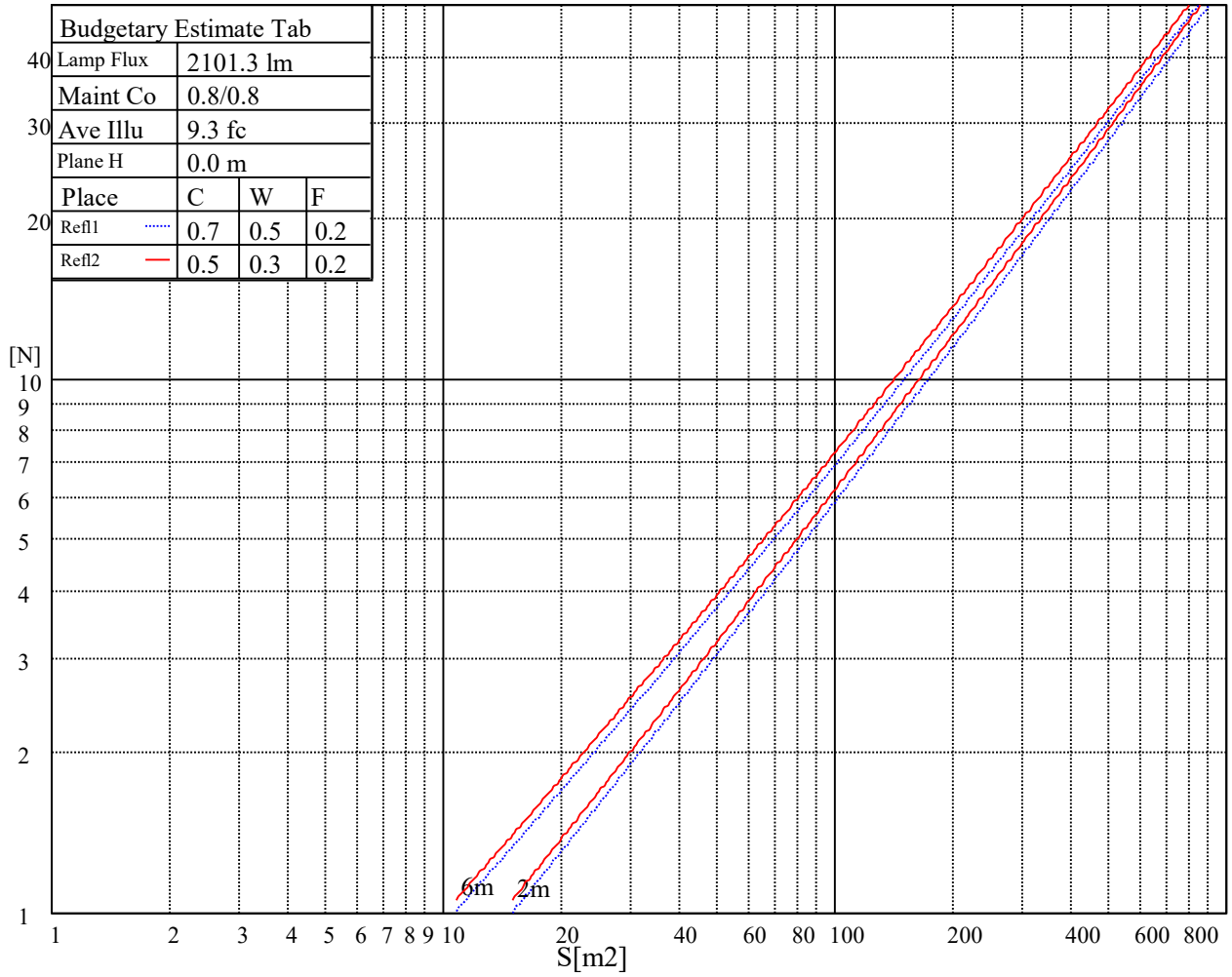


Equipment: GMS 1800
Temperature(°C): 25.0

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

Operator: NT0100
Distance(feet): 22.35

Budgetary Estimate Table



Equipment: GMS 1800
Temperature(°C): 25.0

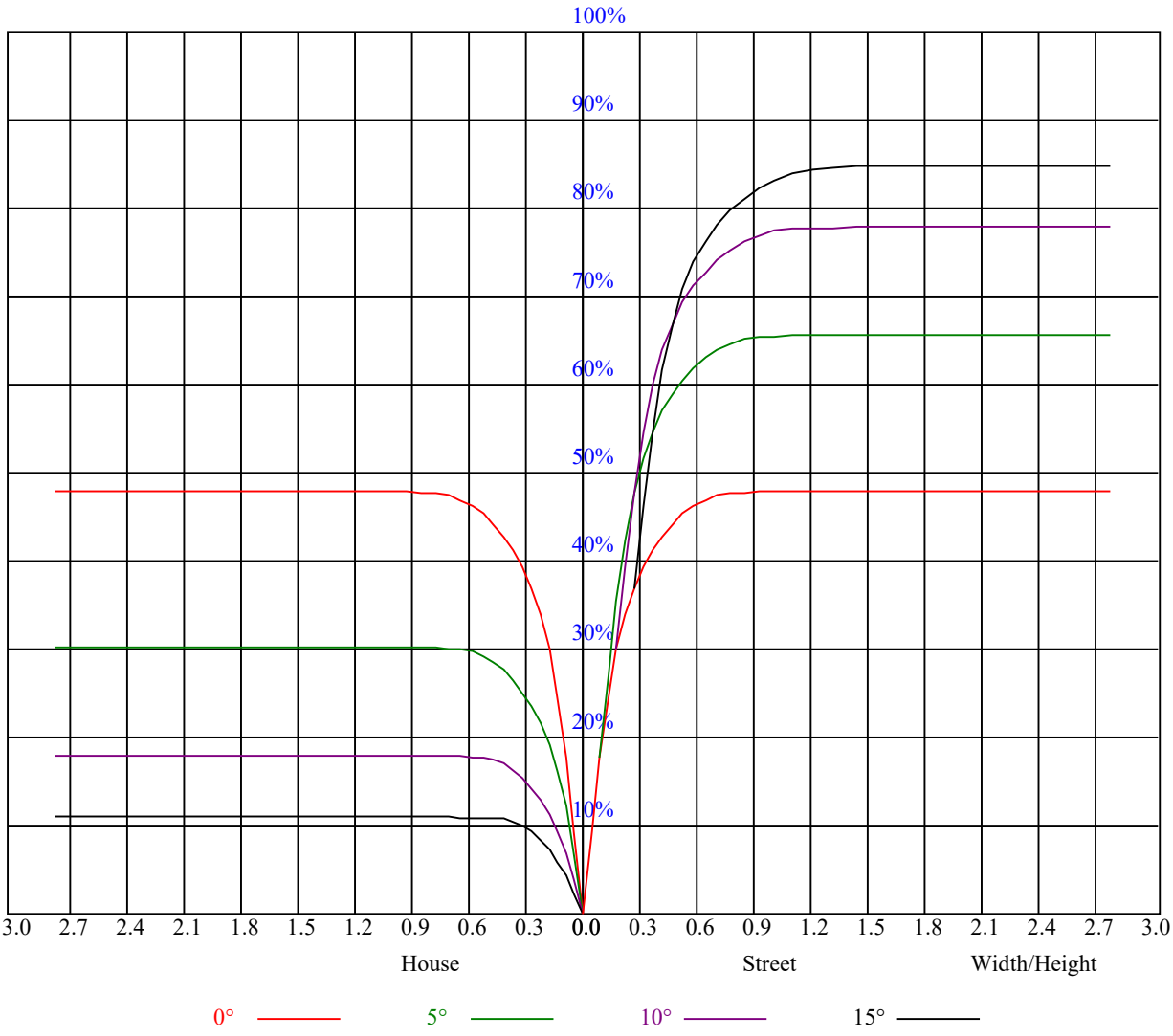
Date: 2020/9/21
Humidity(%): 60.0%

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	1.12	1.12	1.12	1.07	1.07	1.07	1.02	1.02	1.02	0.98	0.98	0.98	0.96
1	1.08	1.06	1.05	1.06	1.05	1.03	1.02	1.01	1.00	0.99	0.98	0.97	0.96	0.95	0.94	0.93
2	1.03	1.00	0.98	1.02	0.99	0.97	0.99	0.96	0.95	0.96	0.94	0.93	0.93	0.92	0.91	0.89
3	0.99	0.95	0.92	0.97	0.94	0.92	0.95	0.92	0.90	0.93	0.91	0.89	0.91	0.89	0.87	0.86
4	0.95	0.91	0.88	0.94	0.90	0.87	0.92	0.89	0.86	0.90	0.87	0.85	0.88	0.86	0.85	0.83
5	0.91	0.87	0.84	0.90	0.87	0.84	0.89	0.86	0.83	0.87	0.85	0.82	0.86	0.84	0.82	0.81
6	0.88	0.84	0.81	0.87	0.84	0.81	0.86	0.83	0.80	0.85	0.82	0.80	0.84	0.81	0.79	0.78
7	0.85	0.81	0.78	0.85	0.81	0.78	0.84	0.80	0.78	0.83	0.80	0.77	0.82	0.79	0.77	0.76
8	0.83	0.78	0.76	0.82	0.78	0.76	0.81	0.78	0.75	0.80	0.77	0.75	0.80	0.77	0.75	0.74
9	0.80	0.76	0.73	0.80	0.76	0.73	0.79	0.76	0.73	0.78	0.75	0.73	0.78	0.75	0.73	0.72
10	0.78	0.74	0.71	0.78	0.74	0.71	0.77	0.74	0.71	0.76	0.73	0.71	0.76	0.73	0.71	0.70

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	13018.92	12786.91	11877.40	11037.50	8897.15	8897.15	8185.32	6950.52	5744.04
45.0	13051.40	13366.95	13394.79	13167.41	12670.90	11984.13	11134.95	10109.43	8991.11
90.0	13594.32	13696.41	13659.29	13366.95	12819.39	12053.73	11167.43	8899.00	8899.00
135.0	12949.32	13366.95	13492.24	13394.79	12995.72	12369.28	11547.94	10568.83	9473.71
180.0	13018.92	13213.82	13130.29	12819.39	12216.14	11431.93	10480.66	9376.26	8169.77
225.0	13051.40	12466.72	11710.35	9136.59	9136.59	8638.68	6866.53	6115.26	4966.32
270.0	13594.32	13209.18	12197.58	11677.87	10661.63	9469.07	8234.74	6940.08	5687.19
315.0	12949.32	12271.83	11450.49	9248.42	9248.42	8014.55	6991.36	5768.63	4696.25
360.0	13018.92	12786.91	11877.40	11037.50	8897.15	8897.15	8185.32	6950.52	5744.04

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	4677.69	3826.19	3196.03	2703.69	2325.50	2014.14	1750.57	1538.97	1362.63
45.0	8271.86	6541.02	5339.17	4708.08	3552.64	3181.41	2689.54	2448.24	2448.24
90.0	7626.16	6347.28	5155.64	4157.04	3536.63	2848.93	2491.16	2139.89	1859.61
135.0	8239.38	6972.57	5733.60	5051.47	3784.66	3371.67	2824.11	2392.56	2392.56
180.0	6926.16	5710.40	4638.48	3756.81	3107.17	2624.57	2313.67	2313.67	1745.93
225.0	4006.70	3268.88	2738.03	2325.97	2021.56	1755.67	1546.86	1382.12	1235.95
270.0	4601.36	3724.33	3079.33	2592.09	2420.40	2075.39	1637.34	1454.98	1301.38
315.0	3835.47	3177.47	2686.52	2302.30	2003.46	1750.10	1544.07	1375.63	1234.10
360.0	4677.69	3826.19	3196.03	2703.69	2325.50	2014.14	1750.57	1538.97	1362.63

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1247.55	1100.46	914.52	899.44	870.94	817.77	774.94	741.48	717.07
45.0	1740.82	1532.01	1361.24	1217.39	1094.42	995.12	916.70	854.05	814.15
90.0	1627.13	1438.27	1288.39	1153.36	1015.54	924.91	899.81	844.54	796.61
135.0	1747.78	1534.79	1357.99	1212.75	1092.10	995.12	919.02	856.37	802.55
180.0	1533.40	1365.88	1224.35	1104.17	1006.72	928.30	863.33	809.04	770.99
225.0	1117.62	907.70	907.70	880.32	820.50	768.25	739.99	711.64	690.95
270.0	1220.18	1100.92	1005.33	927.37	861.48	807.19	764.03	732.01	707.88
315.0	1116.23	919.02	904.35	904.35	845.33	798.28	758.97	728.02	702.22
360.0	1247.55	1100.46	914.52	899.44	870.94	817.77	774.94	741.48	717.07

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	694.43	671.36	643.85	592.29	528.91	455.63	409.60	304.92	259.35
45.0	771.46	732.01	709.28	686.54	667.98	638.28	585.84	521.81	451.27
90.0	757.02	726.58	703.66	680.23	656.33	634.89	579.44	481.81	437.03
135.0	780.74	728.76	703.71	689.79	666.12	653.13	608.58	545.01	475.40
180.0	736.65	708.81	686.07	668.90	634.10	593.27	530.16	459.63	383.99
225.0	668.67	647.33	597.86	537.44	464.27	388.95	312.67	235.45	165.80
270.0	684.68	664.73	630.39	577.49	511.13	437.35	359.86	282.36	251.74
315.0	680.09	653.54	604.45	539.67	468.44	391.64	313.97	238.14	165.24
360.0	694.43	671.36	643.85	592.29	528.91	455.63	409.60	304.92	259.35

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	186.08	119.81	64.27	25.57	14.34	12.53	10.26	9.14	8.58
45.0	376.10	300.00	254.52	254.52	89.37	58.05	15.22	12.58	9.74
90.0	359.02	282.64	206.31	135.96	75.68	33.04	13.55	10.86	7.98
135.0	400.69	321.34	246.63	246.63	106.40	52.20	19.68	12.30	10.67
180.0	306.96	248.03	248.03	85.29	47.05	21.02	12.99	10.39	8.58
225.0	101.86	49.70	18.47	12.25	9.70	7.42	6.45	5.89	5.57
270.0	251.74	84.92	37.77	14.29	10.72	8.12	6.17	5.52	5.01
315.0	101.02	47.84	17.31	11.42	9.37	7.42	6.31	5.94	5.89
360.0	186.08	119.81	64.27	25.57	14.34	12.53	10.26	9.14	8.58

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	8.35	8.21	7.70	7.15	6.73	6.45	6.22	6.03	5.80
45.0	6.77	6.31	6.03	5.99	5.66	5.06	4.64	4.45	4.36
90.0	6.50	6.36	6.22	5.80	5.10	4.59	4.41	4.36	4.13
135.0	8.77	7.66	7.42	6.73	6.31	5.75	5.34	5.01	4.78
180.0	7.47	7.19	6.91	6.31	5.75	5.38	5.24	5.24	5.24
225.0	5.29	4.78	4.41	4.36	4.36	4.41	4.27	4.04	3.67
270.0	4.83	4.55	4.36	4.41	4.45	4.45	4.32	3.99	3.67
315.0	5.80	5.57	5.34	5.34	5.48	5.52	5.48	5.20	4.78
360.0	8.35	8.21	7.70	7.15	6.73	6.45	6.22	6.03	5.80

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	5.43	5.10	4.97	4.78	4.45	4.27	4.08	3.71	3.34
45.0	4.45	4.45	4.13	3.71	3.57	3.43	3.25	3.25	3.25
90.0	3.94	3.57	3.34	3.16	3.06	2.97	2.88	2.78	2.64
135.0	4.73	4.59	4.27	3.81	3.53	3.48	3.43	3.39	3.29
180.0	5.10	4.87	4.50	4.22	4.22	4.04	3.90	3.81	3.48
225.0	3.34	3.25	3.39	3.48	3.53	3.29	3.06	2.88	2.46
270.0	3.48	3.29	3.29	3.34	3.34	3.25	2.97	2.64	2.41
315.0	4.41	4.18	4.04	4.08	3.99	3.85	3.53	3.34	2.92
360.0	5.43	5.10	4.97	4.78	4.45	4.27	4.08	3.71	3.34

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	3.02	2.88	2.78	2.60	2.46	2.32	2.09	1.76	1.48
45.0	3.11	2.88	2.60	2.41	2.27	2.13	2.09	2.04	2.00
90.0	2.37	2.13	2.00	1.90	1.86	1.81	1.76	1.72	1.58
135.0	3.11	2.83	2.69	2.41	2.27	2.18	2.13	2.09	1.95
180.0	3.34	3.06	2.88	2.69	2.51	2.37	2.23	2.18	2.04
225.0	2.23	2.18	2.18	2.18	2.18	1.95	1.62	1.35	1.07
270.0	2.23	2.13	2.04	2.09	2.04	1.86	1.67	1.48	1.25
315.0	2.74	2.64	2.51	2.46	2.41	2.27	2.04	1.62	1.25
360.0	3.02	2.88	2.78	2.60	2.46	2.32	2.09	1.76	1.48

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	1.21	0.97	0.74	0.70	0.70	0.70	0.65	0.60	0.60
45.0	1.76	1.53	1.25	0.93	0.70	0.65	0.65	0.60	0.56
90.0	1.39	1.21	0.97	0.79	0.56	0.65	0.56	0.60	0.60
135.0	1.81	1.62	1.35	1.02	0.79	0.70	0.70	0.60	0.60
180.0	1.76	1.48	1.21	0.88	0.70	0.70	0.70	0.70	0.74
225.0	0.79	0.60	0.65	0.65	0.70	0.97	1.07	0.74	0.51
270.0	0.93	0.70	0.70	0.70	0.60	0.56	0.60	0.56	0.51
315.0	0.93	0.74	0.65	0.60	0.60	0.60	0.56	0.51	0.51
360.0	1.21	0.97	0.74	0.70	0.70	0.70	0.65	0.60	0.60

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	0.60	0.56	0.46	0.51	0.42	0.46	0.74	1.11	0.93
45.0	0.60	0.60	0.51	0.46	0.46	0.46	0.51	0.51	0.42
90.0	0.56	0.56	0.56	0.46	0.42	0.46	0.46	0.46	0.46
135.0	0.60	0.60	0.51	0.51	0.51	0.51	0.46	0.46	0.46
180.0	0.74	0.60	0.51	0.46	0.46	0.51	0.46	0.42	0.37
225.0	0.42	0.42	0.37	0.42	0.42	0.32	0.37	0.42	0.42
270.0	0.46	0.51	0.42	0.46	0.46	0.46	0.46	0.46	0.42
315.0	0.51	0.46	0.46	0.42	0.46	0.46	0.42	0.42	0.42
360.0	0.60	0.56	0.46	0.51	0.42	0.46	0.74	1.11	0.93

Intensity data(cd)

C/γ(°)	90.0
0.0	0.84
45.0	0.46
90.0	0.42
135.0	0.46
180.0	0.32
225.0	0.42
270.0	0.42
315.0	0.46
360.0	0.84