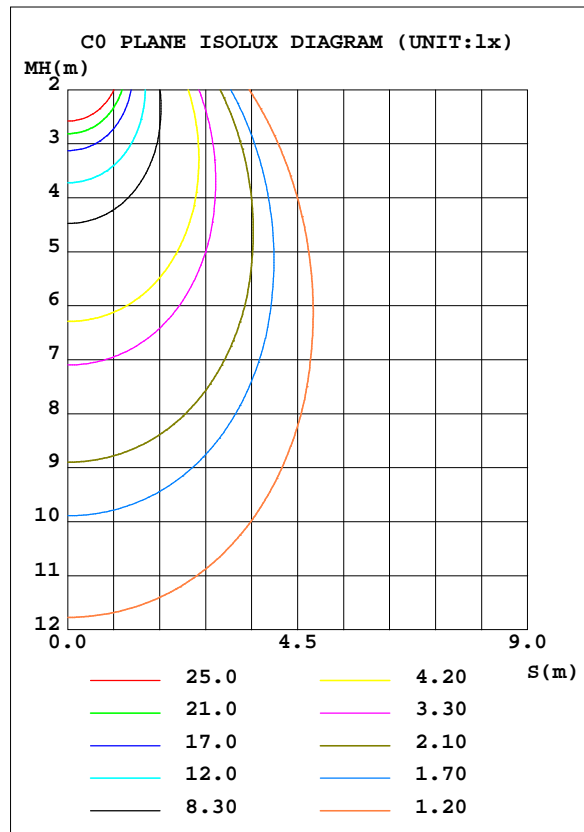
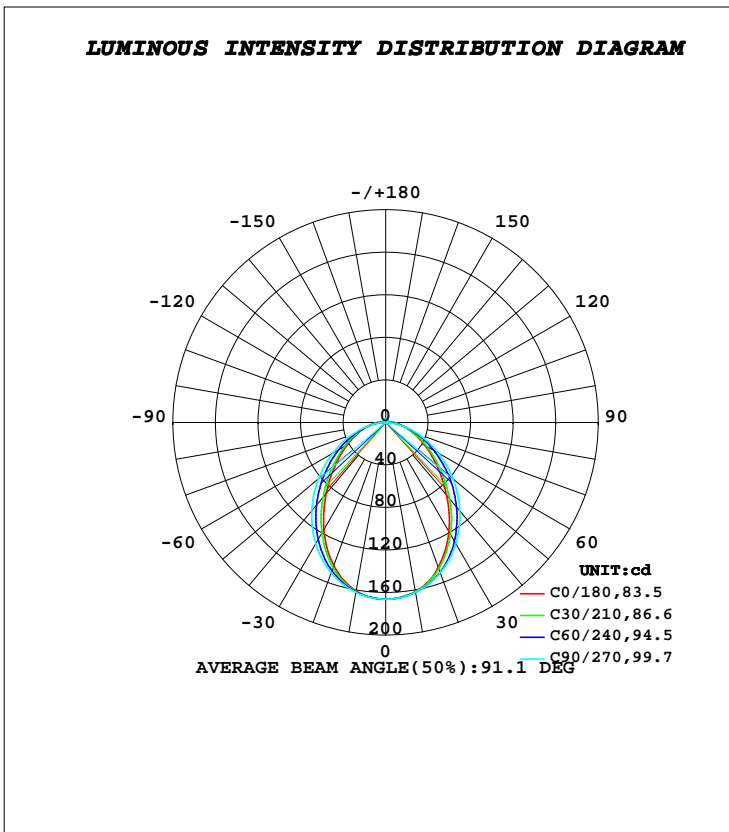




LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:24.000V I:0.2450A P:5.9000W PF:1.0000 Freq:0Hz Lamp Flux:395.226x1 lm		
NAME: 1010-053-935-24	TYPE:LED	
MFR.:		

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL		Imax(cd)	166.3	S/MH(C0/180)	1.08
NOMINAL POWER(W)	5.9	LOR(%)	100.0	S/MH(C90/270)	1.19
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	395.23	η UP, DN(C0-180)	1.7, 48.1
NOMINAL FLUX(lm)	395.226	CIE CLASS	DIRECT	η UP, DN(C180-360)	1.8, 48.3
LAMPS INSIDE	1	η up(%)	3.6	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	24	η down(%)	96.4	CIBSE SHR MAX	1.25



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2019-05-30

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.406.11
Humidity: 65.0%
Test Distance: 8.000m [K=0.7063]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

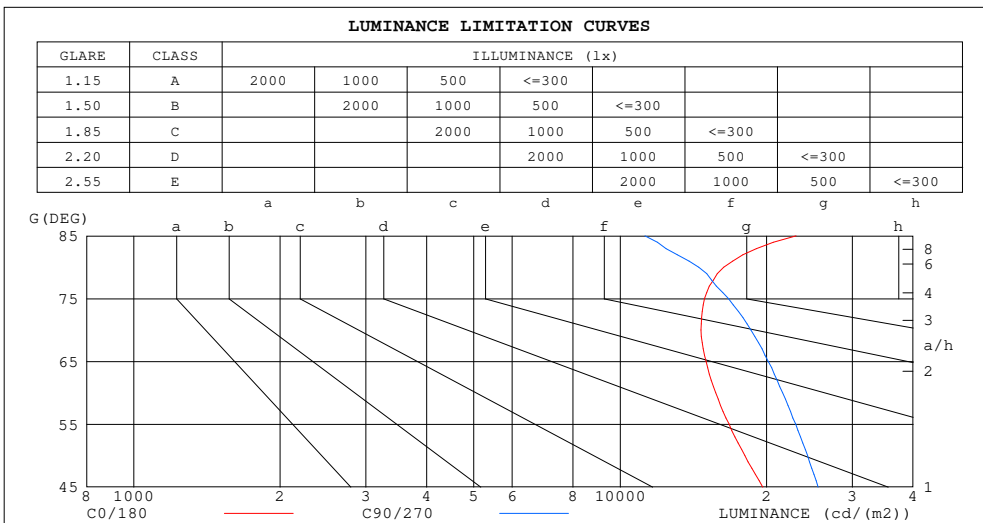
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	160.8	161.5	162.2	161.7	161.4	161.7	162.1	161.5	0- 10	15.65	15.65	3.96,3.96
20	143.2	146.7	150.2	148.1	144.9	148.0	150.4	146.9	10- 20	43.81	59.46	15,15
30	116.5	123.6	131.7	125.7	119.0	125.6	131.9	123.7	20- 30	62.87	122.3	31,31
40	87.09	96.47	108.4	98.87	89.00	98.52	108.5	96.68	30- 40	69.65	192.0	48.6,48.6
50	61.47	70.21	82.72	71.89	62.99	71.80	82.69	70.67	40- 50	65.15	257.1	65.1,65.1
60	41.68	47.61	57.15	48.42	42.26	48.22	56.87	47.85	50- 60	53.35	310.5	78.6,78.6
70	26.58	28.98	33.69	29.03	26.58	29.05	33.36	29.16	60- 70	38.23	348.7	88.2,88.2
80	15.02	14.40	13.36	14.16	15.25	14.28	12.94	14.39	70- 80	22.64	371.4	94,94
90	7.081	5.086	0.9169	5.252	7.690	5.421	1.058	5.056	80- 90	9.734	381.1	96.4,96.4
100	2.482	1.528	1.065	1.977	3.523	2.100	1.225	1.617	90-100	3.364	384.5	97.3,97.3
110	1.323	1.346	1.386	1.402	1.738	1.513	1.499	1.456	100-110	1.633	386.1	97.7,97.7
120	1.641	1.671	1.727	1.685	1.714	1.771	1.823	1.760	110-120	1.555	387.6	98.1,98.1
130	2.023	2.032	2.089	2.068	2.043	2.107	2.150	2.084	120-130	1.699	389.3	98.5,98.5
140	2.402	2.388	2.441	2.442	2.370	2.438	2.466	2.400	130-140	1.737	391.1	99,99
150	2.744	2.708	2.761	2.775	2.688	2.748	2.761	2.704	140-150	1.616	392.7	99.4,99.4
160	3.039	3.003	3.050	3.058	2.980	3.014	3.029	2.983	150-160	1.329	394.0	99.7,99.7
170	3.264	3.244	3.286	3.279	3.201	3.220	3.247	3.214	160-170	0.8862	394.9	99.9,99.9
180	3.361	3.361	3.389	3.379	3.360	3.363	3.391	3.381	170-180	0.3146	395.2	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2019-05-30

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.406.11
Humidity:65.0%
Test Distance:8.000m [K=0.7063]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:24.000V I:0.2450A P:5.9000W PF:1.0000 Freq:0Hz Lamp Flux:395.226x1 lm		
NAME: 1010-053-935-24	TYPE:LED	
MFR.:		



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	22991	11241
80	16317	14513
75	14907	16693
70	14663	18582
65	15027	20154
60	15724	21562
55	16741	22946
50	18039	24280
45	19649	25537

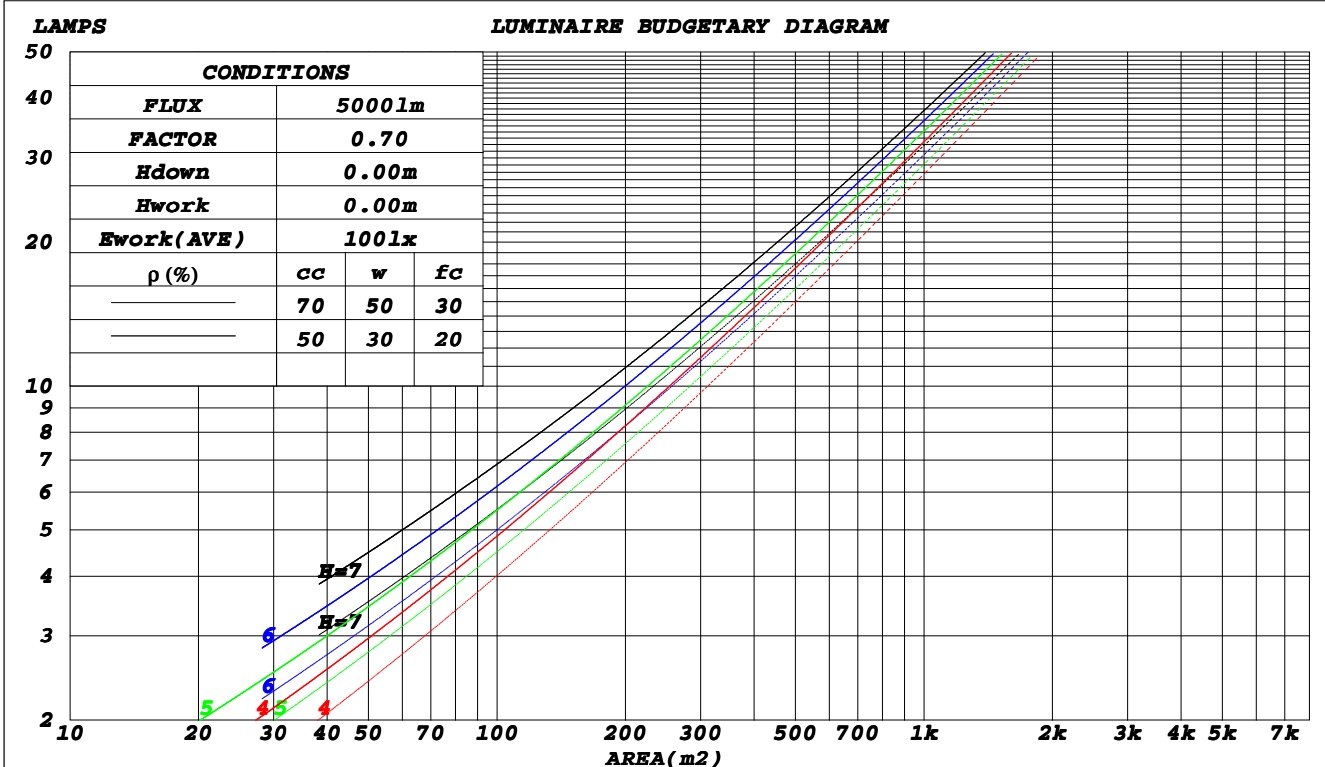
C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2019-05-30

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.406.11
Humidity: 65.0%
Test Distance: 8.000m [K=0.7063]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:24.000V I:0.2450A P:5.9000W PF:1.0000 Freq:0Hz Lamp Flux:395.226x1 lm		
NAME: 1010-053-935-24	TYPE:LED	
MFR.:		

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization(CU)									
0.0	1.18	1.18	1.18	1.15	1.15	1.15	1.09	1.09	1.09	1.04	1.04	1.04	.99	.99	.99	.96
1.0	1.04	.99	.96	1.01	.97	.94	.96	.93	.90	.92	.89	.87	.87	.85	.84	.81
2.0	.91	.85	.79	.89	.83	.78	.85	.80	.75	.81	.77	.73	.77	.74	.71	.69
3.0	.81	.73	.67	.79	.72	.66	.75	.69	.64	.72	.67	.63	.69	.65	.61	.59
4.0	.72	.64	.57	.70	.63	.57	.67	.61	.55	.65	.59	.54	.62	.57	.53	.51
5.0	.65	.56	.50	.63	.55	.49	.61	.54	.48	.59	.52	.48	.56	.51	.47	.45
6.0	.59	.50	.44	.57	.49	.43	.55	.48	.43	.53	.47	.42	.51	.46	.42	.39
7.0	.53	.45	.39	.52	.44	.39	.51	.43	.38	.49	.42	.38	.47	.42	.37	.35
8.0	.49	.41	.35	.48	.40	.35	.46	.39	.34	.45	.39	.34	.44	.38	.34	.32
9.0	.45	.37	.32	.44	.37	.32	.43	.36	.31	.42	.35	.31	.40	.35	.31	.29
10.0	.42	.34	.29	.41	.34	.29	.40	.33	.29	.39	.33	.28	.38	.32	.28	.26



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2019-05-30

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.406.11
 Humidity: 65.0%
 Test Distance: 8.000m [K=0.7063]
 Remarks:

WEC AND CCEC

Test:U:24.000V I:0.2450A P:5.9000W PF:1.0000 Freq:0Hz Lamp Flux:395.226x1 lm		
NAME: 1010-053-935-24	TYPE:LED	
MFR.:		

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.299	.170	.054	.291	.166	.053	.275	.158	.050	.261	.151	.048	.248	.144	.046	
2.0	.278	.152	.047	.271	.149	.046	.257	.143	.044	.245	.137	.043	.233	.132	.042	
3.0	.256	.136	.041	.250	.134	.040	.238	.129	.039	.227	.124	.038	.217	.120	.037	
4.0	.237	.123	.036	.231	.121	.036	.221	.117	.035	.211	.113	.034	.202	.110	.033	
5.0	.220	.112	.032	.214	.110	.032	.205	.107	.031	.196	.103	.031	.188	.100	.030	
6.0	.204	.102	.029	.200	.101	.029	.191	.098	.028	.183	.095	.028	.176	.092	.027	
7.0	.190	.094	.027	.186	.093	.026	.179	.090	.026	.171	.088	.026	.165	.086	.025	
8.0	.178	.087	.024	.175	.086	.024	.168	.084	.024	.161	.082	.024	.155	.080	.023	
9.0	.167	.081	.023	.164	.080	.022	.158	.078	.022	.152	.076	.022	.146	.074	.021	
10.0	.158	.076	.021	.155	.075	.021	.149	.073	.021	.144	.071	.020	.138	.070	.020	

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0																
1.0	.218	.218	.218	.186	.186	.186	.127	.127	.127	.073	.073	.073	.023	.023	.023	
2.0	.198	.160	.127	.170	.137	.110	.116	.095	.077	.067	.055	.045	.022	.018	.015	
3.0	.190	.142	.104	.163	.123	.090	.112	.085	.063	.064	.050	.037	.021	.016	.012	
4.0	.182	.129	.088	.156	.111	.077	.107	.077	.054	.062	.045	.032	.020	.015	.010	
5.0	.174	.118	.077	.150	.102	.067	.103	.071	.047	.060	.042	.028	.019	.014	.009	
6.0	.167	.110	.069	.144	.095	.060	.099	.067	.042	.057	.039	.025	.019	.013	.008	
7.0	.160	.103	.063	.138	.089	.054	.095	.063	.039	.055	.037	.023	.018	.012	.008	
8.0	.154	.097	.058	.133	.084	.050	.092	.059	.036	.053	.035	.021	.017	.011	.007	
9.0	.148	.092	.054	.128	.080	.047	.088	.056	.034	.052	.033	.020	.017	.011	.007	
10.0	.143	.088	.051	.123	.076	.045	.085	.054	.032	.050	.032	.019	.016	.010	.006	

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2019-05-30

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.406.11
 Humidity:65.0%
 Test Distance:8.000m [K=0.7063]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:24.000V I:0.2450A P:5.9000W PF:1.0000 Freq:0Hz Lamp Flux:395.226x1 lm		
NAME: 1010-053-935-24	TYPE:LED	
MFR.:		

ceiling/cavity	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions	Viewed crosswise					Viewed endwise				
x = 2H y = 2H	21.9	23.3	22.2	23.6	23.8	23.2	24.6	23.5	24.9	25.1
3H	23.2	24.5	23.6	24.8	25.1	24.5	25.8	24.9	26.1	26.4
4H	23.9	25.1	24.2	25.4	25.7	25.1	26.3	25.4	26.6	26.9
6H	24.5	25.6	24.8	26.0	26.3	25.5	26.6	25.8	26.9	27.3
8H	24.8	25.9	25.2	26.2	26.6	25.6	26.7	26.0	27.0	27.4
12H	25.1	26.2	25.5	26.5	26.9	25.6	26.7	26.0	27.0	27.4
4H 2H	22.5	23.8	22.9	24.1	24.4	23.6	24.8	23.9	25.1	25.4
3H	24.1	25.1	24.5	25.5	25.9	25.1	26.2	25.5	26.5	26.9
4H	24.8	25.8	25.3	26.2	26.6	25.8	26.8	26.2	27.1	27.5
6H	25.6	26.5	26.0	26.9	27.3	26.3	27.2	26.8	27.6	28.0
8H	26.0	26.8	26.4	27.2	27.7	26.5	27.3	26.9	27.7	28.2
12H	26.4	27.1	26.9	27.6	28.1	26.6	27.3	27.1	27.8	28.2
8H 4H	25.1	26.0	25.6	26.4	26.8	26.0	26.8	26.4	27.2	27.7
6H	26.1	26.8	26.6	27.3	27.8	26.7	27.3	27.2	27.8	28.3
8H	26.6	27.2	27.2	27.7	28.2	26.9	27.5	27.4	28.0	28.5
12H	27.2	27.7	27.8	28.3	28.8	27.1	27.6	27.7	28.2	28.7
12H 4H	25.2	25.9	25.6	26.4	26.8	26.0	26.7	26.5	27.2	27.7
6H	26.2	26.8	26.7	27.3	27.8	26.7	27.3	27.3	27.8	28.3
8H	26.8	27.3	27.3	27.8	28.4	27.1	27.6	27.6	28.1	28.6
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.2					+ 0.2 / - 0.2				
1.5H	+ 0.1 / - 0.3					+ 0.1 / - 0.2				
2.0H	+ 0.1 / - 0.3					+ 0.3 / - 0.4				

CIE Pub.117, 395.2 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = -3.2)

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2019-05-30

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.406.11
 Humidity:65.0%
 Test Distance:8.000m [K=0.7063]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:24.000V I:0.2450A P:5.9000W PF:1.0000 Freq:0Hz Lamp Flux:395.226x1 lm		
NAME: 1010-053-935-24	TYPE:LED	
MFR.:		

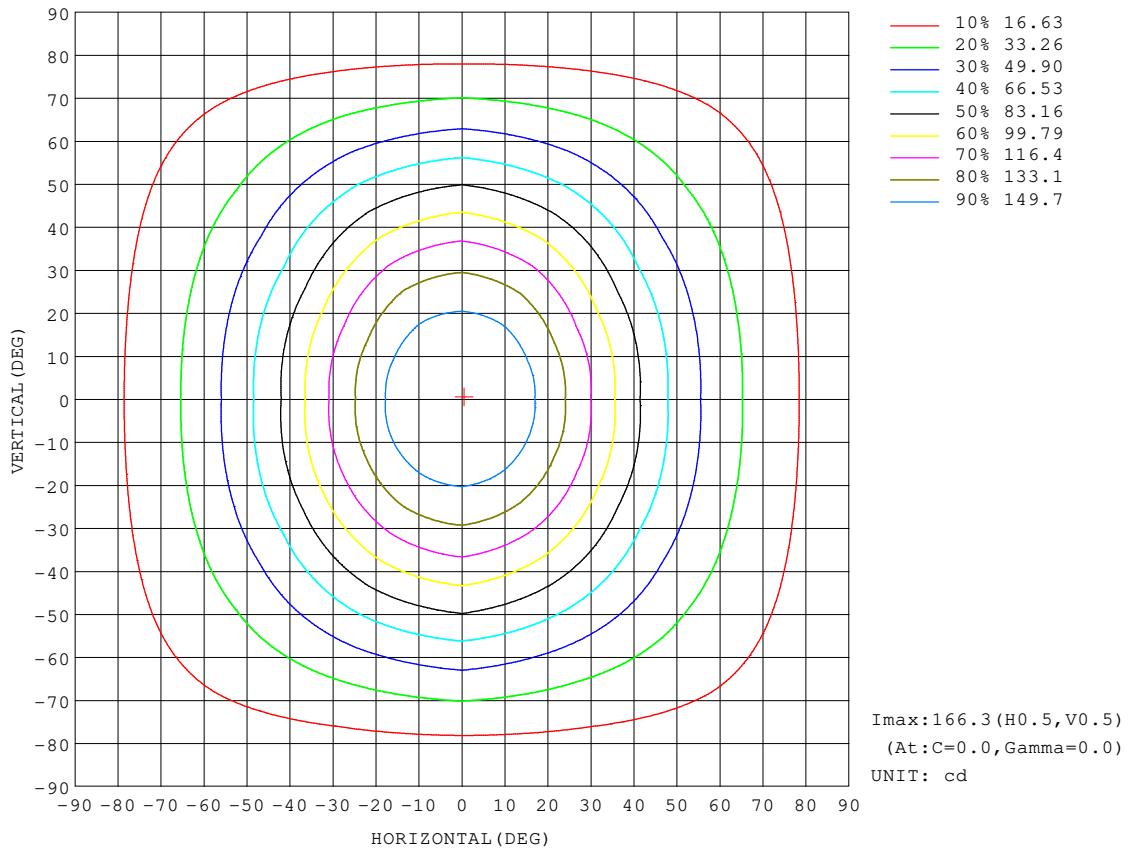
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	60	49	42	59	48	42	58	48	42	36
0.80	70	59	52	68	58	51	66	57	51	44
1.00	78	67	60	76	66	60	74	67	59	52
1.25	84	74	67	83	73	67	80	72	66	59
1.50	89	80	73	87	78	72	84	76	71	63
2.00	95	87	81	93	86	80	89	83	78	70
2.50	99	91	86	97	90	84	92	87	82	73
3.00	102	95	90	100	94	89	95	90	86	77
4.00	106	100	96	103	98	94	98	94	91	81
5.00	108	103	99	105	101	97	100	97	94	84
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2019-05-30

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.406.11
Humidity:65.0%
Test Distance:8.000m [K=0.7063]
Remarks:

ISOCANDELA DIAGRAM

Test:U:24.000V I:0.2450A P:5.9000W PF:1.0000 Freq:0Hz Lamp Flux:395.226x1 lm		
NAME: 1010-053-935-24	TYPE:LED	
MFR.:		



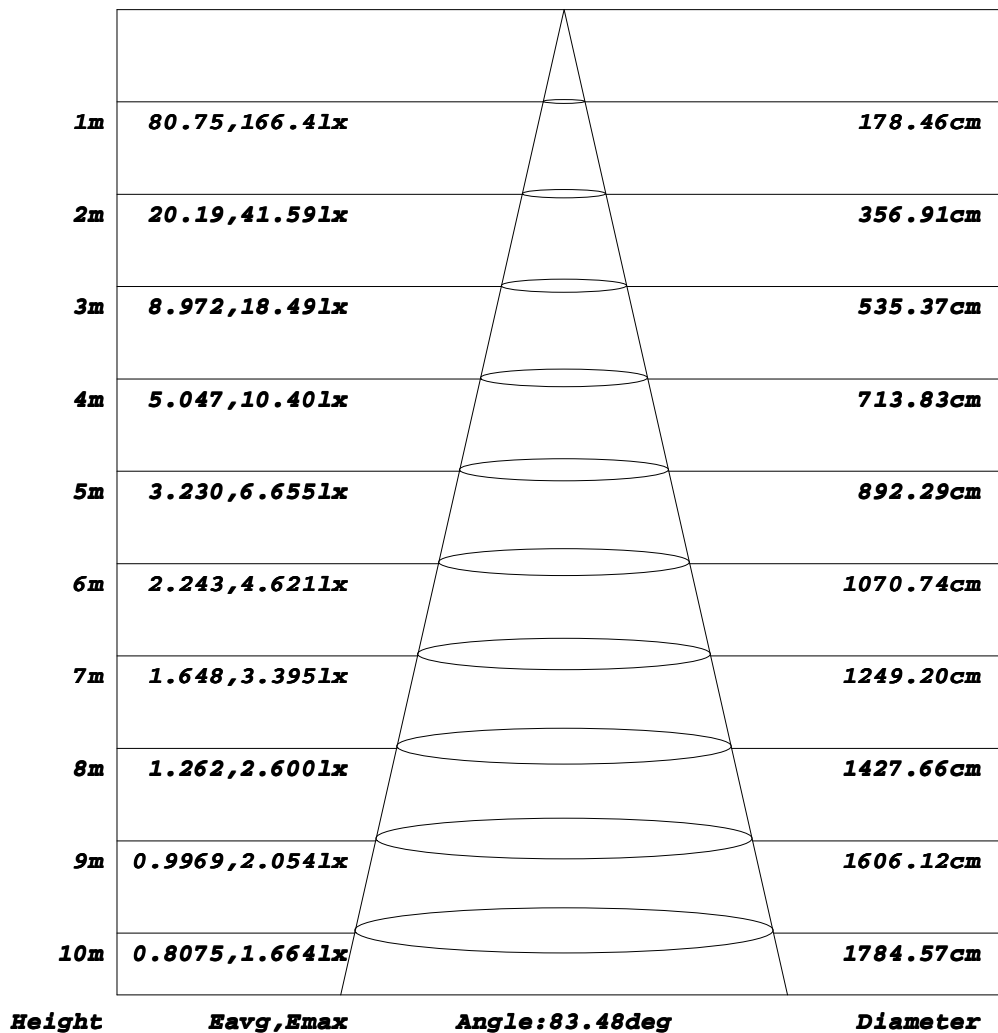
C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2019-05-30

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.406.11
Humidity: 65.0%
Test Distance: 8.000m [K=0.7063]
Remarks:

AAI Figure

Test:U:24.000V I:0.2450A P:5.9000W PF:1.0000 Freq:0Hz Lamp Flux:395.226x1 lm		
NAME: 1010-053-935-24	TYPE:LED	
MFR.:		

Flux out:205.7 lm



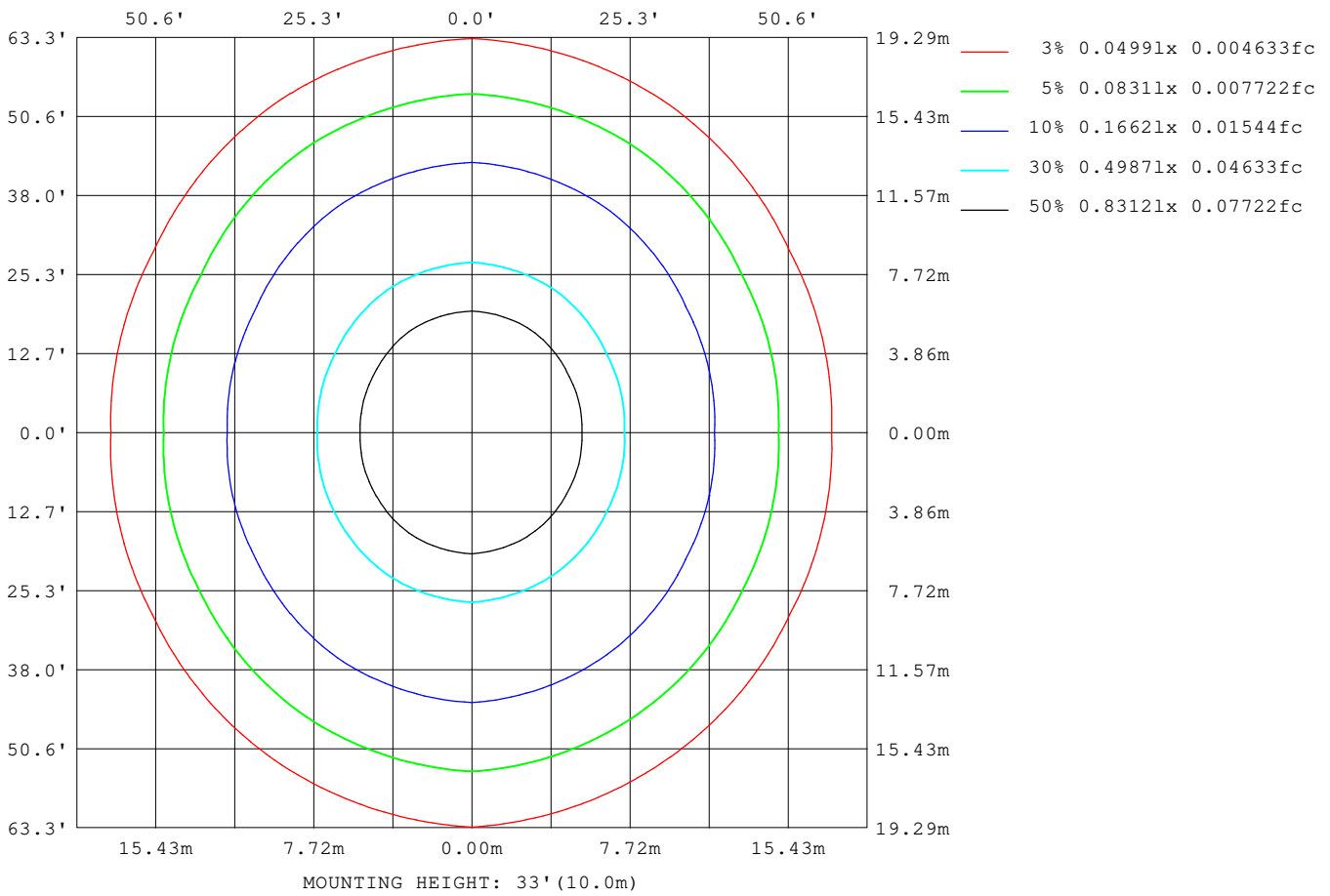
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2019-05-30

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.406.11
Humidity: 65.0%
Test Distance: 8.000m [K=0.7063]
Remarks:

ISOLUX DIAGRAM

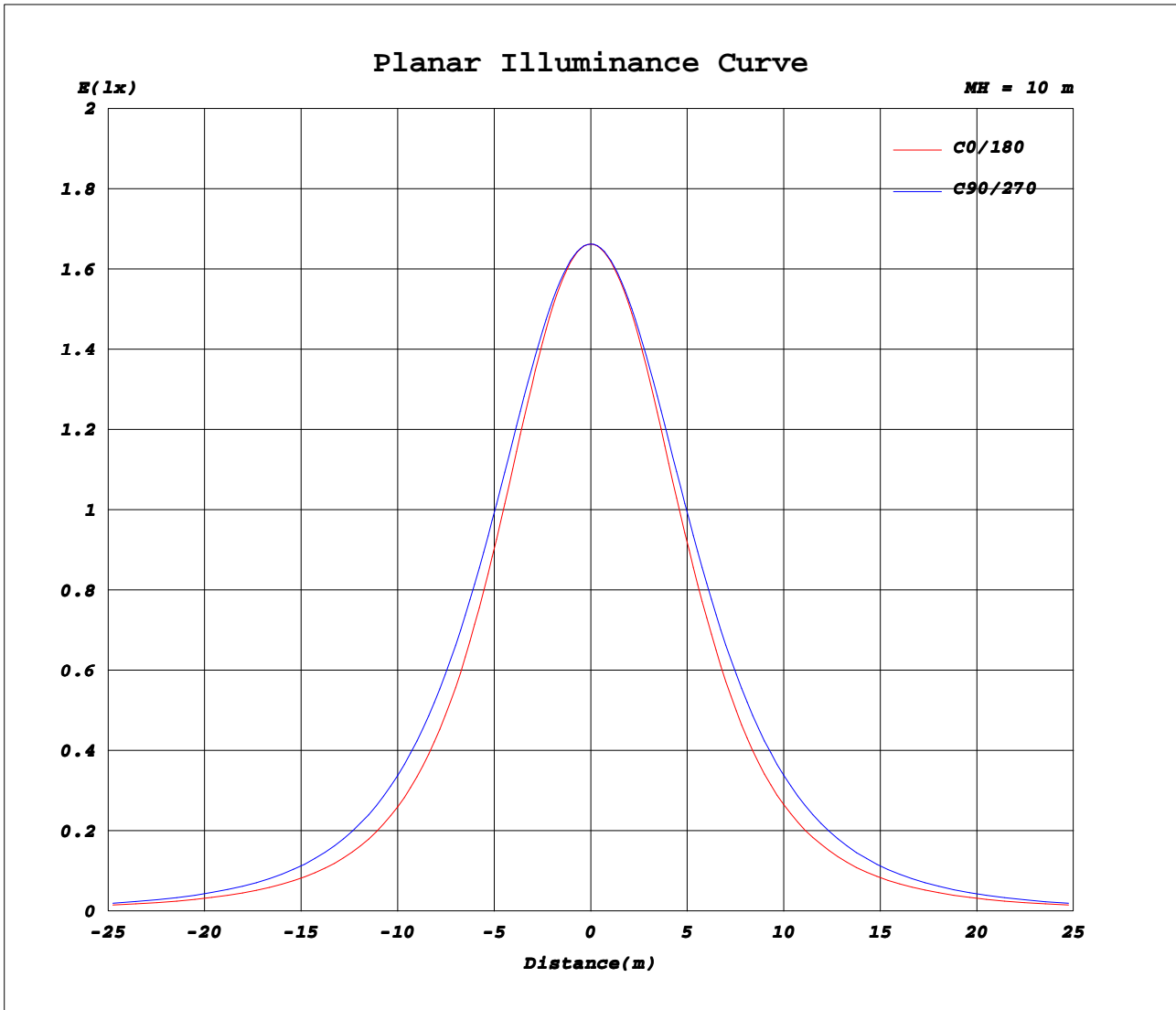
Test:U:24.000V I:0.2450A P:5.9000W PF:1.0000 Freq:0Hz Lamp Flux:395.226x1 lm		
NAME: 1010-053-935-24	TYPE:LED	
MFR.:		



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2019-05-30

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.406.11
Humidity: 65.0%
Test Distance: 8.000m [K=0.7063]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2019-05-30

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.406.11
Humidity: 65.0%
Test Distance: 8.000m [K=0.7063]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:24.000V I:0.2450A P:5.9000W PF:1.0000 Freq:0Hz Lamp Flux:395.226x1 lm		
NAME: 1010-053-935-24	TYPE:LED	
MFR.:		

Table--1

UNIT: cd

C (DEG) \ γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330							
0	166	166	166	166	166	166	166	166	166	166	166	166							
5	165	165	165	165	165	165	165	165	165	165	165	165							
10	161	161	162	162	162	162	161	161	162	162	162	161							
15	153	155	156	157	157	156	155	155	157	157	157	154							
20	143	145	148	150	149	147	145	146	150	150	149	145							
25	130	133	139	142	140	135	132	135	141	142	139	133							
30	117	120	127	132	129	123	119	122	129	132	128	120							
35	101	106	115	120	116	109	104	108	117	121	115	105							
40	87.1	91.6	101	108	103	94.5	89.0	93.4	104	109	102	91.2							
45	73.7	78.2	88.0	95.7	90.0	80.2	75.2	79.2	90.4	95.8	89.2	77.7							
50	61.5	65.6	74.8	82.7	76.7	67.0	63.0	66.2	77.4	82.7	76.1	65.2							
55	50.9	54.2	62.5	69.8	64.0	55.4	51.8	54.6	64.2	69.6	63.3	54.0							
60	41.7	44.4	50.9	57.1	51.8	45.0	42.3	44.3	52.1	56.9	51.6	44.1							
65	33.7	35.5	40.1	45.1	40.7	35.7	33.8	35.4	40.9	44.9	40.7	35.4							
70	26.6	27.8	30.2	33.7	30.4	27.6	26.6	27.4	30.7	33.4	30.7	27.7							
75	20.5	21.0	21.4	22.9	21.3	20.7	20.5	20.6	21.5	22.5	21.7	20.9							
80	15.0	15.1	13.7	13.4	13.3	15.0	15.3	14.9	13.7	12.9	13.9	14.9							
85	10.6	10.2	7.75	5.19	7.53	10.3	11.0	10.2	7.84	4.88	7.75	10.1							
90	7.08	6.44	3.74	0.92	3.79	6.71	7.69	6.75	4.09	1.06	3.75	6.36							
95	4.39	3.73	1.62	0.92	1.94	4.29	5.24	4.36	2.18	1.11	1.70	3.70							
100	2.48	1.98	1.07	1.07	1.22	2.73	3.52	2.80	1.40	1.22	1.22	2.02							
105	1.43	1.26	1.21	1.22	1.20	1.76	2.33	1.84	1.34	1.36	1.34	1.37							
110	1.32	1.33	1.37	1.39	1.36	1.44	1.74	1.55	1.48	1.50	1.47	1.44							
115	1.47	1.49	1.53	1.56	1.53	1.49	1.58	1.58	1.63	1.66	1.63	1.58							
120	1.64	1.65	1.69	1.73	1.71	1.66	1.71	1.75	1.80	1.82	1.78	1.74							
125	1.83	1.83	1.87	1.91	1.90	1.85	1.88	1.91	1.96	1.98	1.94	1.90							
130	2.02	2.01	2.05	2.09	2.09	2.04	2.04	2.08	2.13	2.15	2.10	2.07							
135	2.22	2.20	2.22	2.27	2.28	2.24	2.20	2.26	2.29	2.31	2.25	2.23							
140	2.40	2.39	2.39	2.44	2.45	2.43	2.37	2.42	2.46	2.47	2.41	2.39							
145	2.58	2.55	2.55	2.60	2.62	2.60	2.53	2.58	2.62	2.61	2.56	2.54							
150	2.74	2.71	2.71	2.76	2.78	2.77	2.69	2.73	2.76	2.76	2.71	2.70							
155	2.90	2.86	2.86	2.91	2.93	2.92	2.84	2.87	2.90	2.90	2.86	2.84							
160	3.04	3.00	3.01	3.05	3.06	3.05	2.98	2.99	3.03	3.03	2.99	2.98							
165	3.16	3.13	3.14	3.18	3.19	3.18	3.10	3.11	3.15	3.15	3.12	3.10							
170	3.26	3.23	3.25	3.29	3.29	3.27	3.20	3.20	3.24	3.25	3.23	3.20							
175	3.33	3.31	3.33	3.36	3.36	3.35	3.29	3.29	3.32	3.33	3.32	3.30							
180	3.36	3.35	3.37	3.39	3.39	3.37	3.36	3.35	3.37	3.39	3.39	3.37							

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2019-05-30

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.406.11
Humidity: 65.0%
Test Distance: 8.000m [K=0.7063]
Remarks: