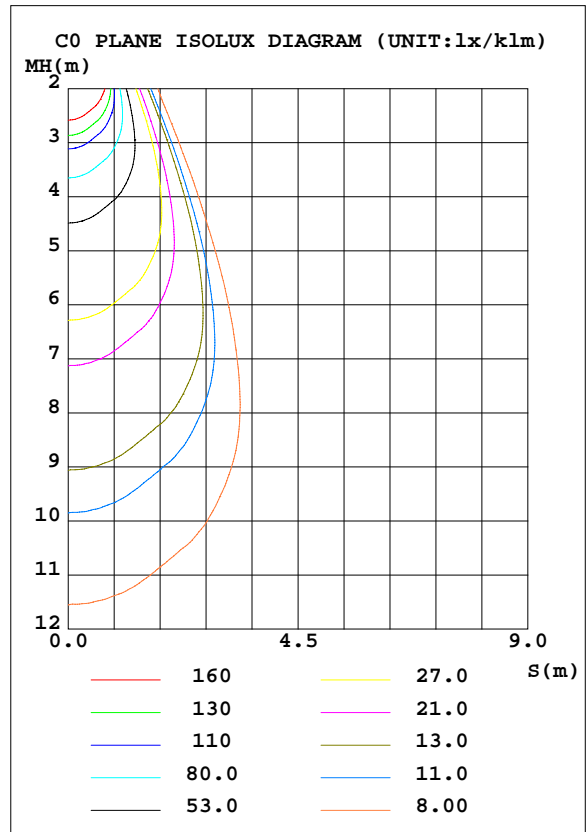
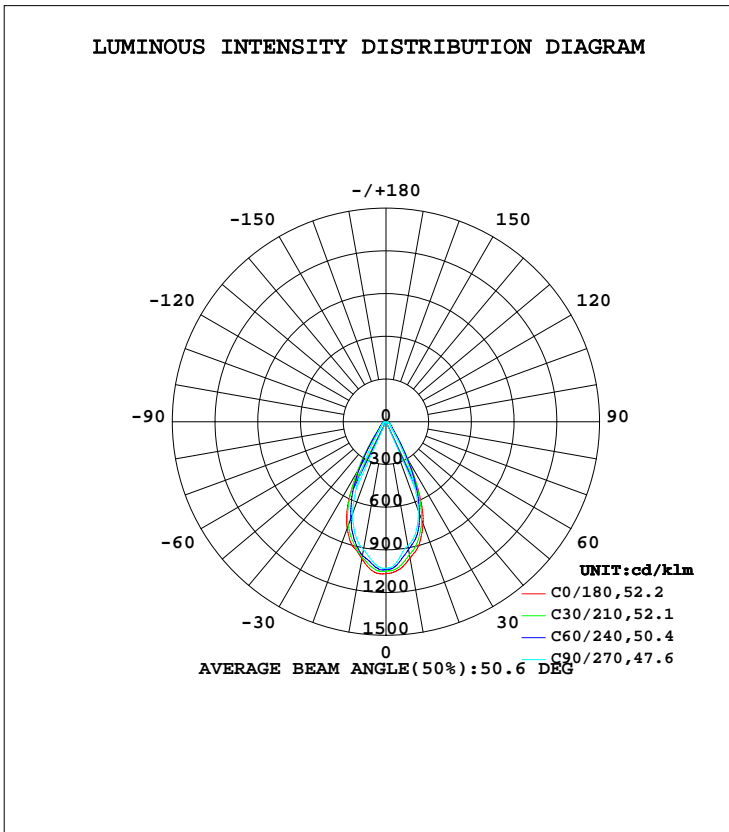


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: PAR20-9W-3000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL		I _{max} (cd/klm)	1069	S/MH(C0/180)	0.80
NOMINAL POWER(W)	9	LOR(%)	80.0	S/MH(C90/270)	0.73
RATED VOLTAGE(V)	220.0	TOTAL FLUX(lm/klm)	800.07	η UP, DN(C0-180)	0.0,39.1
NOMINAL FLUX(lm)	1000	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0,40.9
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	230.0	η down(%)	80.0	CIBSE SHR MAX	0.80



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2021-12-10

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-i300_V1 SYSTEM V2.0.406.11
 Humidity:65.0%
 Test Distance:3.161m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

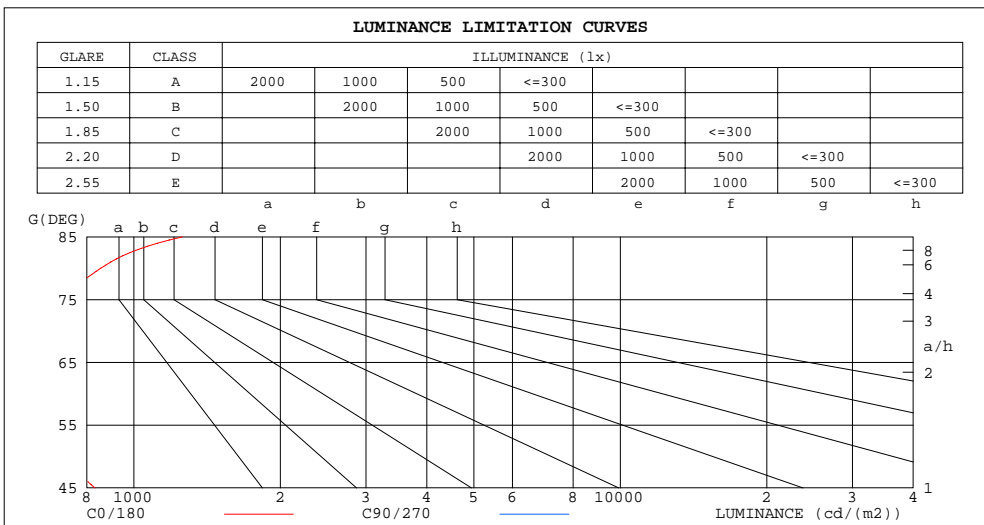
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	Φ lum,lamp
10	973.3	929.8	885.6	899.8	976.6	959.5	913.3	919.9	0- 10	93.55	93.55	11.7,9.35
20	761.1	710.3	665.1	693.8	796.9	748.2	685.2	686.1	10- 20	234.2	327.7	41,32.8
30	304.6	303.9	238.0	319.7	385.2	380.7	248.9	280.7	20- 30	235.3	563.0	70.4,56.3
40	83.87	88.24	65.53	88.52	98.07	105.6	71.05	83.21	30- 40	106.6	669.6	83.7,67
50	47.42	47.02	41.43	46.29	50.86	53.14	41.25	45.62	40- 50	47.87	717.5	89.7,71.7
60	32.87	30.67	27.66	30.63	34.56	32.20	27.10	29.56	50- 60	34.25	751.7	94,75.2
70	22.63	20.07	17.47	19.83	24.23	20.73	16.42	18.78	60- 70	24.96	776.7	97.1,77.7
80	14.84	10.62	8.175	10.76	16.67	11.38	7.889	10.03	70- 80	16.37	793.0	99.1,79.3
90	7.108	0.1138	0.0715	0.2119	9.507	0.2214	0.1218	0.1707	80- 90	7.036	800.1	100,80
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
DEG	LUMINOUS INTENSITY:cd/klm									UNIT:lm/klm		

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2021-12-10

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-i300_V1 SYSTEM V2.0.406.11
 Humidity:65.0%
 Test Distance:3.161m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

NAME: PAR20-9W-3000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	1259	373
80	855	471
75	735	489
70	662	511
65	651	533
60	657	553
55	689	596
50	738	645
45	832	708

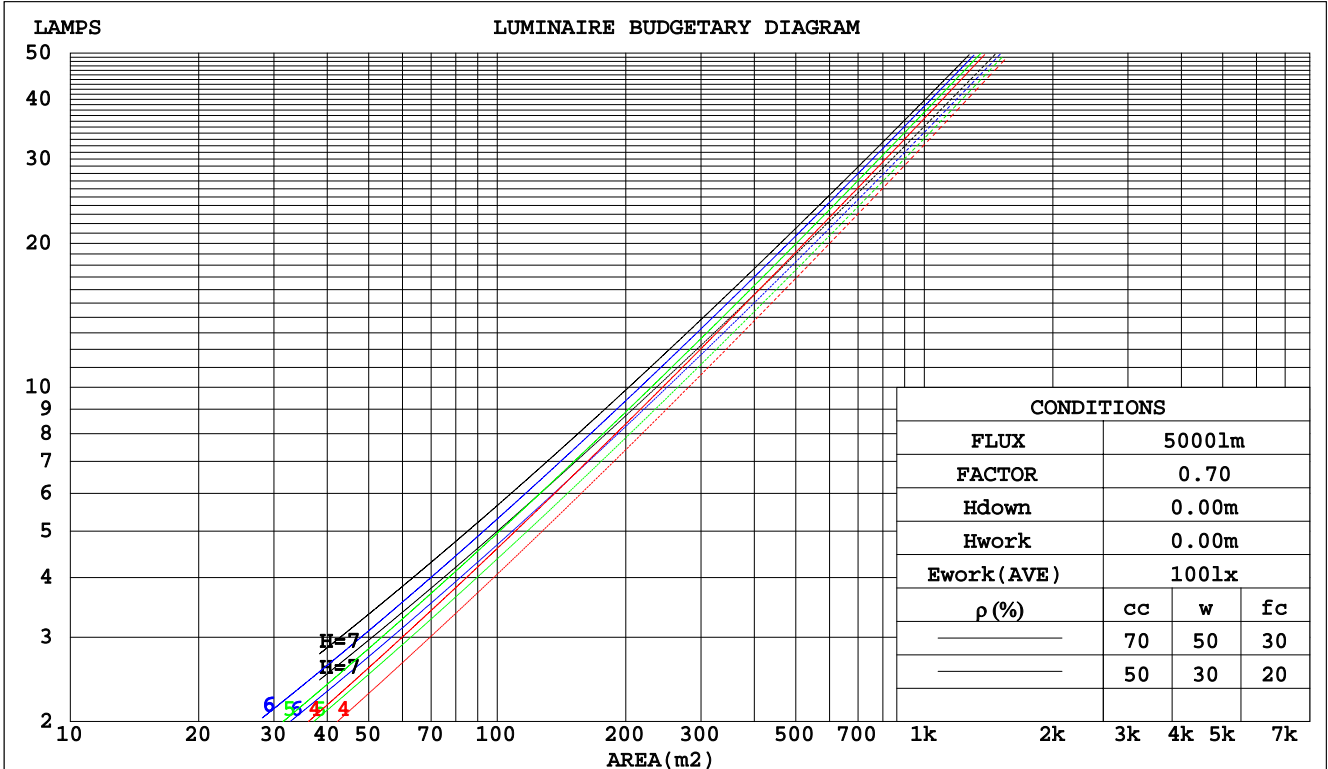
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2021-12-10

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-i300_V1 SYSTEM V2.0.406.11
 Humidity: 65.0%
 Test Distance: 3.161m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

NAME: PAR20-9W-3000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	Shielding Angle:

pcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pw																0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization(CU)									
0.0	.95	.95	.95	.93	.93	.93	.89	.89	.89	.85	.85	.85	.82	.82	.82	.80
1.0	.87	.85	.83	.86	.84	.82	.82	.81	.79	.79	.78	.77	.77	.76	.75	.73
2.0	.81	.77	.74	.79	.76	.73	.77	.74	.72	.74	.72	.70	.72	.70	.69	.67
3.0	.75	.70	.67	.74	.70	.66	.72	.68	.65	.70	.67	.64	.68	.65	.63	.62
4.0	.70	.65	.61	.69	.64	.61	.67	.63	.60	.65	.62	.59	.64	.61	.59	.57
5.0	.65	.60	.57	.64	.60	.56	.63	.59	.56	.62	.58	.55	.60	.57	.55	.54
6.0	.61	.56	.53	.61	.56	.52	.59	.55	.52	.58	.54	.52	.57	.54	.51	.50
7.0	.58	.53	.49	.57	.52	.49	.56	.52	.49	.55	.51	.48	.54	.51	.48	.47
8.0	.54	.49	.46	.54	.49	.46	.53	.49	.46	.52	.48	.46	.51	.48	.45	.44
9.0	.52	.47	.43	.51	.47	.43	.50	.46	.43	.50	.46	.43	.49	.45	.43	.42
10.0	.49	.44	.41	.49	.44	.41	.48	.44	.41	.47	.43	.41	.47	.43	.41	.40



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2021-12-10

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-i300_V1 SYSTEM V2.0.406.11
 Humidity: 65.0%
 Test Distance: 3.161m [K=1.0000]
 Remarks:

WEC AND CCEC

NAME: PAR20-9W-3000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	Shielding Angle:

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.164	.093	.030	.159	.090	.029	.148	.085	.027	.139	.080	.026	.130	.076	.024	
2.0	.154	.084	.026	.149	.082	.025	.140	.078	.024	.132	.074	.023	.125	.071	.022	
3.0	.144	.076	.023	.140	.075	.023	.132	.072	.022	.125	.069	.021	.119	.066	.020	
4.0	.135	.070	.021	.131	.069	.020	.125	.066	.020	.119	.064	.019	.113	.062	.019	
5.0	.126	.064	.019	.124	.063	.018	.118	.061	.018	.113	.059	.018	.108	.058	.017	
6.0	.119	.060	.017	.117	.059	.017	.112	.057	.017	.107	.056	.016	.103	.054	.016	
7.0	.113	.056	.016	.111	.055	.016	.106	.054	.015	.102	.052	.015	.098	.051	.015	
8.0	.107	.052	.015	.105	.052	.015	.101	.051	.014	.098	.049	.014	.094	.048	.014	
9.0	.102	.049	.014	.100	.049	.014	.097	.048	.014	.094	.047	.013	.090	.046	.013	
10.0	.097	.047	.013	.096	.046	.013	.093	.045	.013	.090	.045	.013	.087	.044	.013	

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.152	.152	.152	.130	.130	.130	.089	.089	.089	.051	.051	.051	.016	.016	.016	
1.0	.138	.126	.114	.118	.108	.098	.081	.074	.068	.047	.043	.040	.015	.014	.013	
2.0	.127	.106	.088	.109	.091	.076	.075	.063	.053	.043	.037	.031	.014	.012	.010	
3.0	.118	.091	.070	.101	.078	.060	.069	.055	.042	.040	.032	.025	.013	.010	.008	
4.0	.110	.079	.056	.094	.069	.049	.065	.048	.034	.037	.028	.020	.012	.009	.007	
5.0	.102	.070	.046	.088	.061	.040	.061	.042	.028	.035	.025	.017	.011	.008	.006	
6.0	.096	.063	.039	.083	.054	.034	.057	.038	.024	.033	.022	.014	.011	.007	.005	
7.0	.091	.057	.033	.078	.049	.029	.054	.035	.020	.031	.020	.012	.010	.007	.004	
8.0	.086	.052	.028	.074	.045	.025	.051	.032	.017	.030	.019	.010	.010	.006	.003	
9.0	.082	.048	.025	.070	.041	.021	.049	.029	.015	.028	.017	.009	.009	.006	.003	
10.0	.078	.044	.022	.067	.038	.019	.047	.027	.013	.027	.016	.008	.009	.005	.003	

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2021-12-10

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-i300_V1 SYSTEM V2.0.406.11
 Humidity:65.0%
 Test Distance:3.161m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

NAME: PAR20-9W-3000K					TYPE:					WEIGHT:				
SPEC.:					DIM.:					SERIAL No.:				
MFR.: EVERFINE					SUR.:					Shielding Angle:				
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	8.2	9.2	8.4	9.4	9.5	7.5	8.5	7.7	8.7	8.9				
3H	9.5	10.4	9.7	10.6	10.8	8.6	9.5	8.8	9.7	9.9				
4H	10.2	11.1	10.5	11.3	11.6	9.0	9.9	9.3	10.2	10.4				
6H	11.0	11.8	11.3	12.1	12.3	9.5	10.3	9.8	10.5	10.8				
8H	11.4	12.2	11.7	12.5	12.7	9.6	10.4	9.9	10.7	10.9				
12H	11.9	12.6	12.2	12.9	13.2	9.7	10.5	10.0	10.7	11.0				
4H 2H	8.5	9.4	8.8	9.7	9.9	8.0	8.9	8.3	9.1	9.3				
3H	10.1	10.9	10.4	11.2	11.4	9.3	10.1	9.6	10.3	10.6				
4H	11.0	11.7	11.4	12.0	12.4	9.9	10.6	10.3	10.9	11.2				
6H	12.0	12.6	12.4	13.0	13.3	10.4	11.1	10.8	11.4	11.8				
8H	12.5	13.1	12.9	13.4	13.8	10.7	11.2	11.0	11.6	12.0				
12H	13.1	13.6	13.5	14.0	14.4	10.8	11.3	11.2	11.7	12.1				
8H 4H	11.3	11.9	11.7	12.2	12.6	10.3	10.8	10.7	11.2	11.6				
6H	12.4	12.9	12.8	13.3	13.7	11.0	11.4	11.4	11.8	12.3				
8H	13.0	13.5	13.5	13.9	14.3	11.3	11.7	11.7	12.1	12.6				
12H	13.8	14.1	14.2	14.6	15.0	11.5	11.8	11.9	12.3	12.8				
12H 4H	11.3	11.8	11.7	12.2	12.6	10.3	10.9	10.7	11.2	11.6				
6H	12.5	12.9	12.9	13.3	13.8	11.1	11.5	11.5	11.9	12.4				
8H	13.2	13.5	13.6	14.0	14.4	11.4	11.8	11.9	12.3	12.7				
Variations with the observer position at spacings:														
S = 1.0H	+ 0.2 / - 0.3					+ 0.3 / - 0.4								
1.5H	+ 0.3 / - 0.2					+ 0.4 / - 0.4								
2.0H	+ 0.1 / - 0.2					+ 0.2 / - 0.4								

CIE Pub.117, 1000 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 0.0)

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2021-12-10

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-i300_V1 SYSTEM V2.0.406.11
 Humidity:65.0%
 Test Distance:3.161m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

NAME: PAR20-9W-3000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	Shielding Angle:

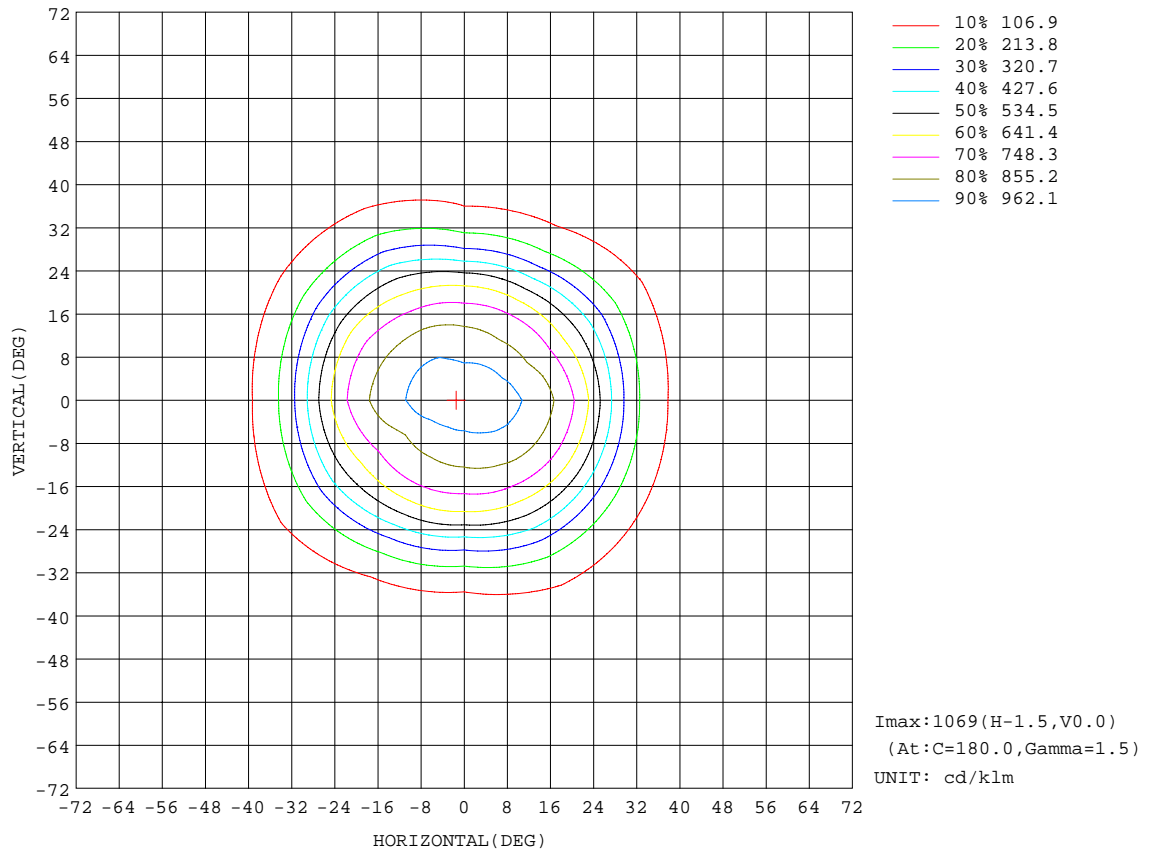
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	65	59	56	65	59	56	64	59	56	52
0.80	71	66	62	71	66	62	70	65	62	58
1.00	76	70	67	75	70	66	73	70	66	62
1.25	79	74	71	78	74	70	77	73	70	66
1.50	82	77	74	81	76	73	79	75	72	68
2.00	84	80	77	83	79	77	81	78	75	71
2.50	86	82	79	85	81	79	82	79	77	72
3.00	88	84	82	86	83	81	83	81	79	74
4.00	90	87	85	88	86	84	85	83	81	75
5.00	91	89	87	89	87	85	86	84	83	77
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:2021-12-10

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-i300_V1 SYSTEM V2.0.406.11
 Humidity:65.0%
 Test Distance:3.161m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

NAME: PAR20-9W-3000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	Shielding Angle:

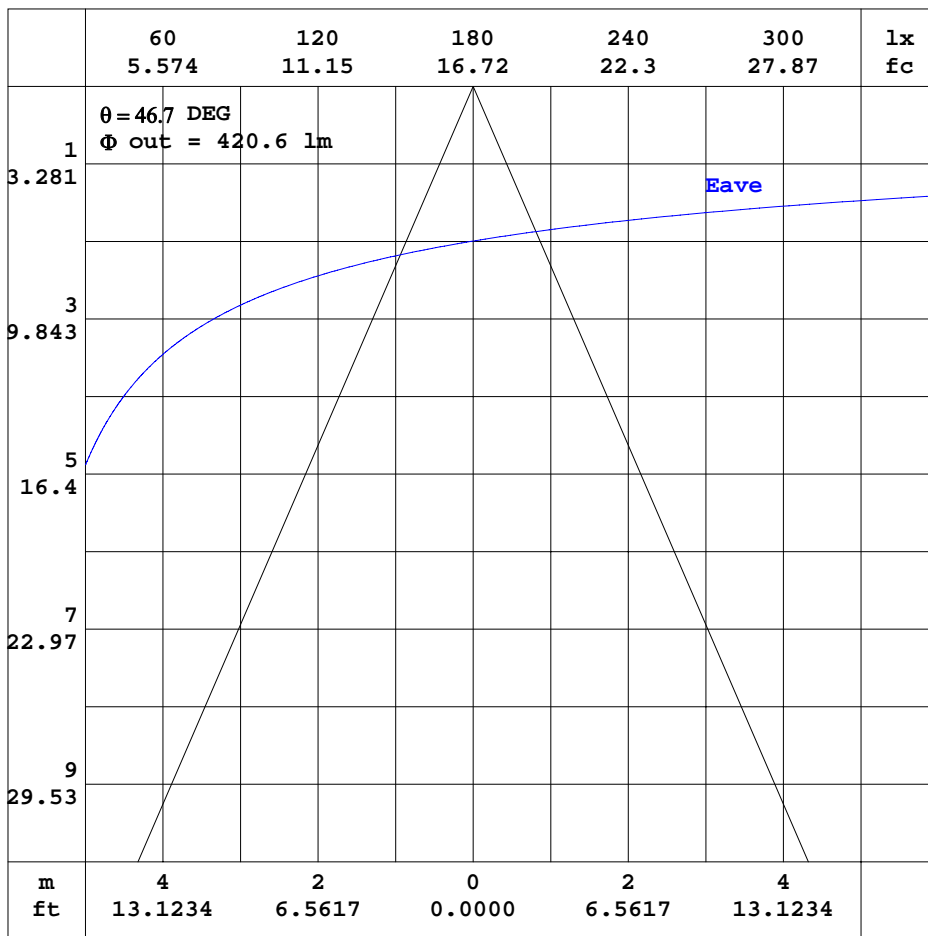


C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2021-12-10

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-i300_V1 SYSTEM V2.0.406.11
 Humidity:65.0%
 Test Distance:3.161m [K=1.0000]
 Remarks:

AAI CURVES

NAME: PAR20-9W-3000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	Shielding Angle:



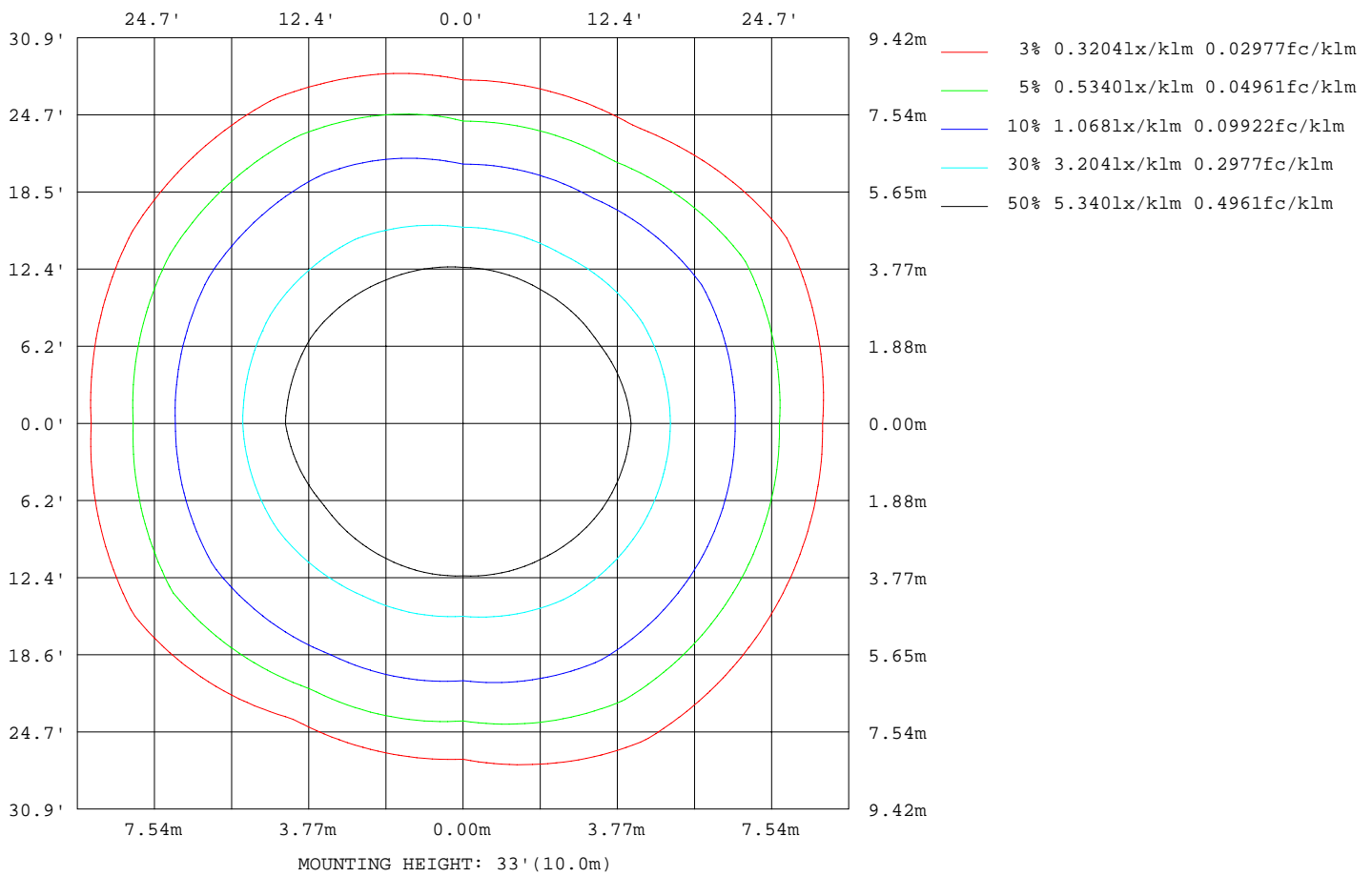
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2021-12-10

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-i300_V1 SYSTEM V2.0.406.11
 Humidity: 65.0%
 Test Distance: 3.161m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

NAME: PAR20-9W-3000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2021-12-10

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-i300_V1 SYSTEM V2.0.406.11
 Humidity: 65.0%
 Test Distance: 3.161m [K=1.0000]
 Remarks:

LED Avg.L Report

NAME: PAR20-9W-3000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:	Shielding Angle:

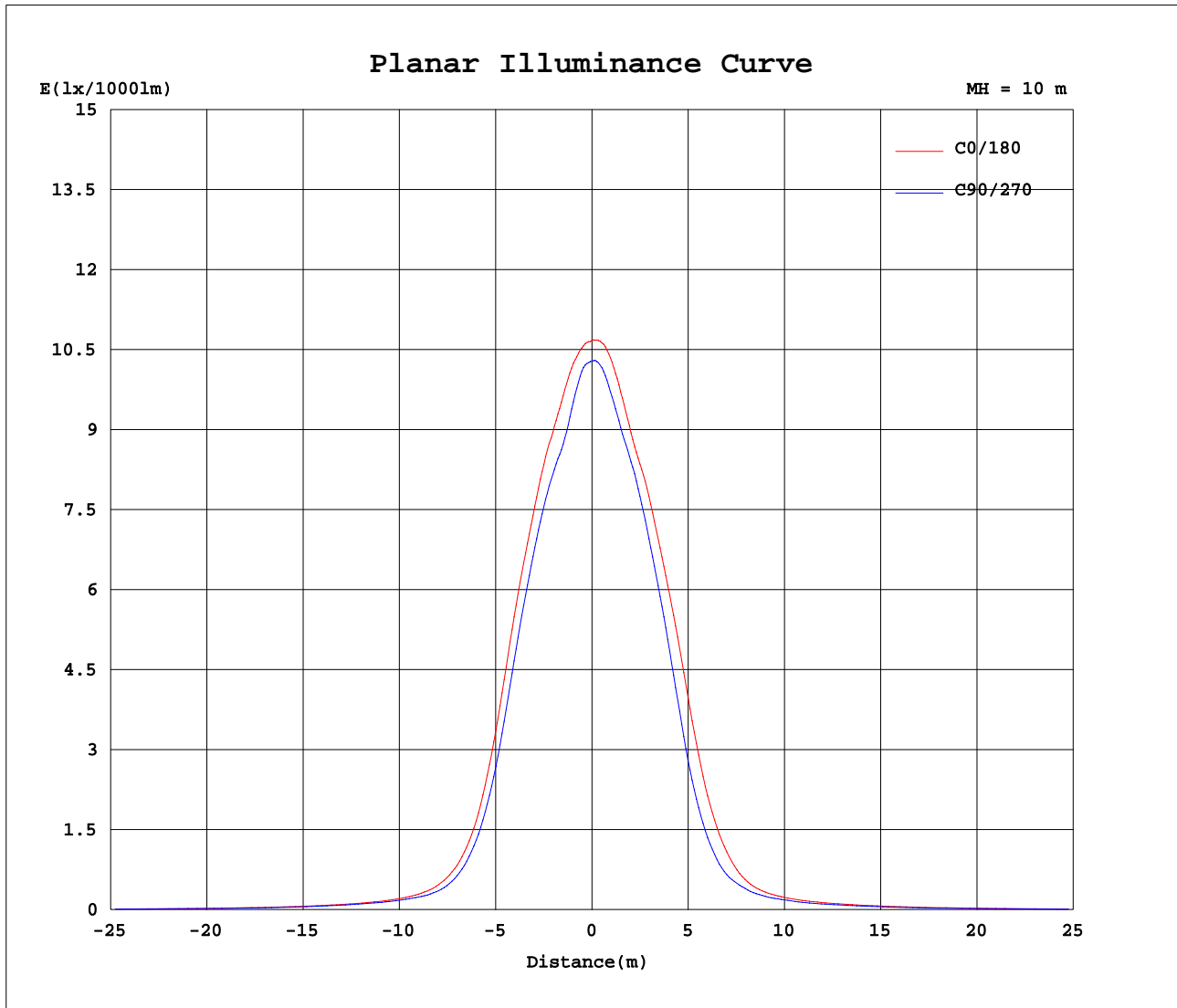
AvgL	cd/m2
L_0~180(65)av	673
L_0~180(75)av	759
L_0~180(85)av	1372
L_90~270(65)av	522
L_90~270(75)av	483
L_90~270(85)av	364
L_45(65)av	601
L_45(75)av	588
L_45(85)av	677

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2021-12-10

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-i300_V1 SYSTEM V2.0.406.11
 Humidity:65.0%
 Test Distance:3.161m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2021-12-10

γ Range: 0 - 90DEG
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 Test System: EVERFINE GO-i300_V1 SYSTEM V2.0.406.11
 Humidity: 65.0%
 Test Distance: 3.161m [K=1.0000]
 Remarks:

