

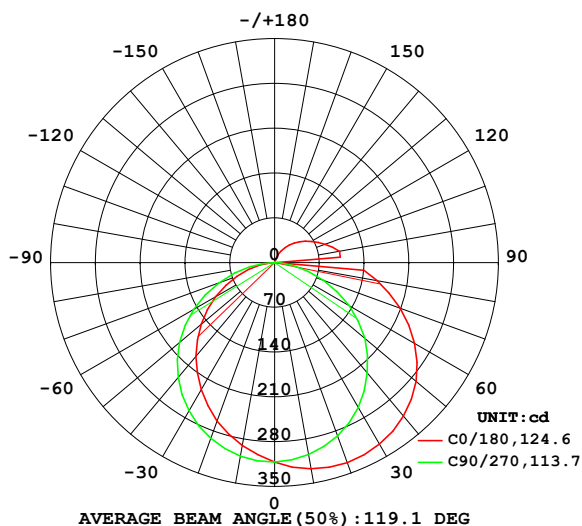
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

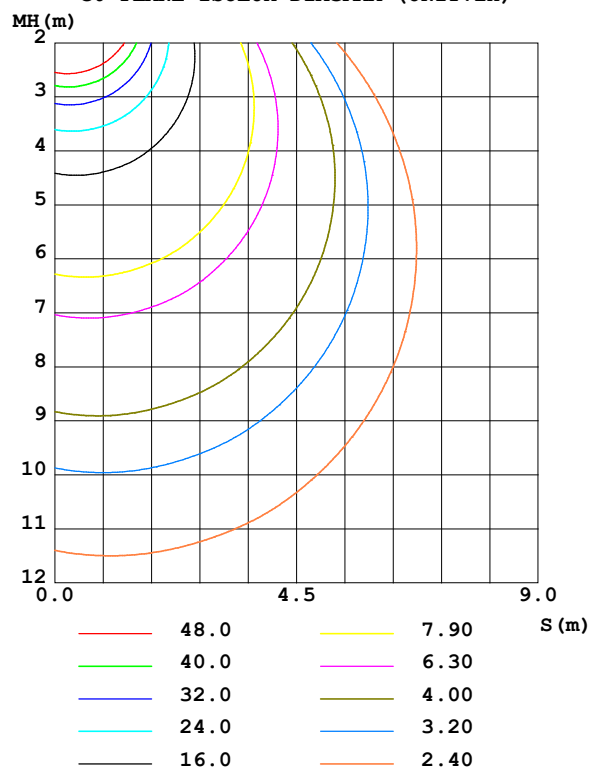
Test:U:119.94V I:0.1254A P:14.395W PF:0.9569 Freq:60.01Hz		
Lamp Flux:1117.28x1 lm		
NAME: 8977WH-5CCT_IES		
MFR.: Royal Pacific Ltd.		

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 77.61 lm/W
MODEL		I _{max} (cd)	333.0	S/MH (C0/180)		1.11
NOMINAL POWER (W)	14	LOR (%)	100.0	S/MH (C90/270)		1.28
RATED VOLTAGE (V)	120	TOTAL FLUX (lm)	1117.3	η UP, DN (C0-180)		6.4, 49.2
NOMINAL FLUX (lm)	1117.28	CIE CLASS	DIRECT	η UP, DN (C180-360)		2.4, 42.1
LAMPS INSIDE	1	η up (%)	8.8	CIBSE SHR NOM		1.50
TEST VOLTAGE (V)	120	η down (%)	91.2	CIBSE SHR MAX		1.50

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT: lx)



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3 °C
Operators: DAMIN
Test Date: 2025-08-08

γ Range: 0 - 180DEG
γ Interval: 5.0DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.464
Humidity: 65.0%
Test Distance: 26.000m [K=1.2600]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	327.1	319.9	304.8	294.1	290.7	295.5	307.6	321.1	0- 10	29.57	29.57	2.65,2.65
20	333.0	316.7	288.1	268.2	263.7	270.4	292.2	321.4	10- 20	85.27	114.8	10.3,10.3
30	327.9	303.4	261.6	235.7	229.2	238.4	267.8	311.4	20- 30	131.0	245.9	22,22
40	313.5	280.2	225.4	198.0	191.4	200.5	234.6	291.3	30- 40	161.3	407.2	36.4,36.4
50	288.6	248.6	184.2	155.2	149.7	157.4	194.2	261.0	40- 50	173.0	580.2	51.9,51.9
60	252.4	209.1	134.6	110.3	106.4	112.2	145.6	221.9	50- 60	164.4	744.6	66.6,66.6
70	208.8	161.3	81.21	64.55	63.01	65.94	92.30	173.6	60- 70	136.7	881.3	78.9,78.9
80	162.6	107.7	30.76	23.43	22.89	24.17	39.83	120.5	70- 80	94.95	976.2	87.4,87.4
90	3.152	1.786	0	0	0	0.0027	0.0442	2.617	80- 90	43.02	1019	91.2,91.2
100	103.4	56.51	0	0	0	0	0.3828	67.54	90-100	24.02	1043	93.4,93.4
110	84.33	44.75	0	0	0	0	0	53.76	100-110	27.09	1070	95.8,95.8
120	66.78	35.57	0	0	0	0	0	40.96	110-120	20.23	1091	97.6,97.6
130	50.94	26.56	0	0	0	0	0	25.52	120-130	13.82	1104	98.8,98.8
140	36.05	17.79	0	0	0	0	0.1532	10.67	130-140	8.112	1113	99.6,99.6
150	21.88	9.086	0	0	0	0	0.1528	0.3849	140-150	3.625	1116	99.9,99.9
160	1.800	1.769	0	0	0	0	0.1528	0	150-160	1.013	1117	100,100
170	0.4657	0.5392	0	0	0	0.3079	0.3821	0	160-170	0.1075	1117	100,100
180	0.4568	0.5392	0	0	0	0.3851	0.5349	0	170-180	0.0210	1117	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

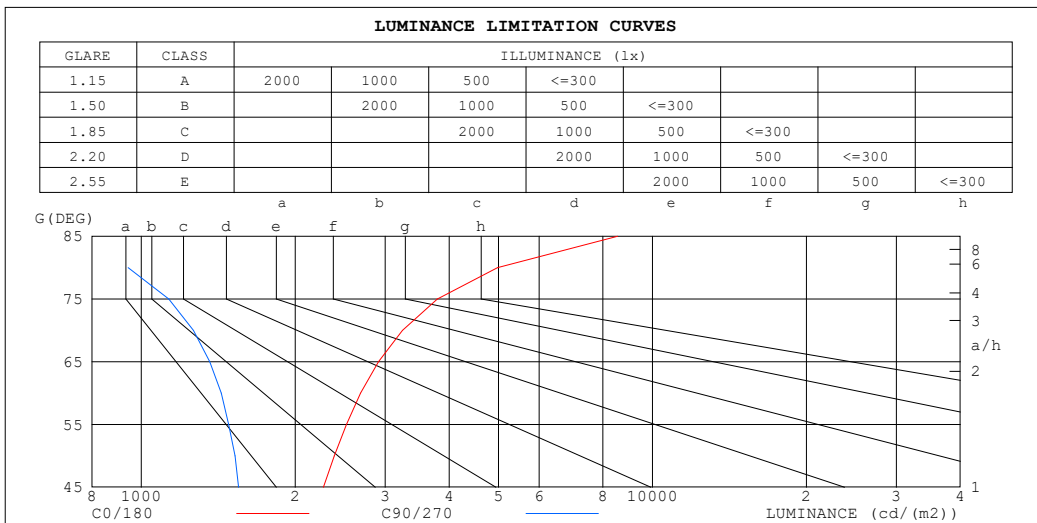
C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3℃
 Operators:DAMIN
 Test Date:2025-08-08

γ Range: 0 - 180DEG
 γ Interval: 5.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.464
 Humidity:65.0%
 Test Distance:26.000m [K=1.2600]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINANCE LIMITATION CURVES

Test:U:119.94V I:0.1254A P:14.395W PF:0.9569 Freq:60.01Hz		
Lamp Flux:1117.28x1 lm		
NAME: 8977WH-5CCT_IES		
MFR.: Royal Pacific Ltd.		



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	8549	659
80	4977	943
75	3795	1132
70	3244	1264
65	2908	1361
60	2682	1433
55	2521	1481
50	2386	1525
45	2270	1549

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3℃
 Operators:DAMIN
 Test Date:2025-08-08

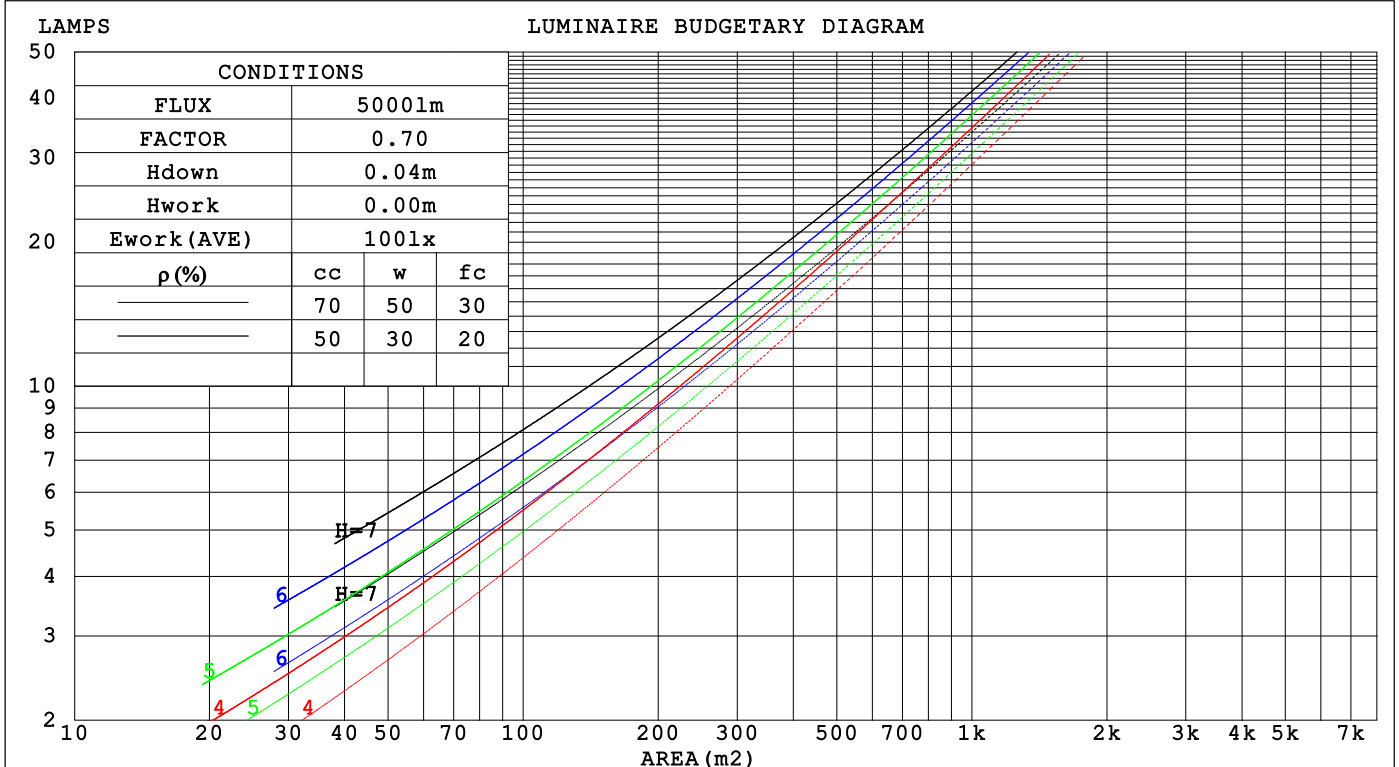
γ Range: 0 - 180DEG
 γ Interval: 5.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.464
 Humidity:65.0%
 Test Distance:26.000m [K=1.2600]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:119.94V I:0.1254A P:14.395W PF:0.9569 Freq:60.01Hz		
Lamp Flux:1117.28x1 lm		
NAME: 8977WH-5CCT_IES		
MFR.: Royal Pacific Ltd.		

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio															
	Coefficients of Utilization(CU)															
0.0	1.17	1.17	1.17	1.13	1.13	1.13	1.06	1.06	1.06	.00	.00	.00	.94	.94	.94	.91
1.0	1.00	.95	.91	.97	.93	.89	.91	.88	.84	.86	.83	.80	.81	.78	.76	.74
2.0	.86	.79	.73	.84	.77	.71	.79	.73	.68	.74	.69	.65	.70	.66	.63	.60
3.0	.75	.67	.60	.73	.65	.59	.69	.62	.57	.65	.59	.54	.61	.56	.52	.50
4.0	.66	.57	.50	.64	.56	.49	.61	.53	.48	.57	.51	.46	.54	.49	.45	.42
5.0	.59	.50	.43	.57	.49	.42	.54	.47	.41	.51	.45	.40	.49	.43	.38	.36
6.0	.53	.44	.37	.51	.43	.37	.49	.41	.36	.46	.40	.35	.44	.38	.34	.31
7.0	.48	.39	.33	.47	.38	.32	.44	.37	.31	.42	.35	.30	.40	.34	.30	.27
8.0	.44	.35	.29	.42	.34	.29	.40	.33	.28	.38	.32	.27	.37	.31	.26	.24
9.0	.40	.31	.26	.39	.31	.26	.37	.30	.25	.35	.29	.24	.34	.28	.24	.22
10.0	.37	.29	.23	.36	.28	.23	.34	.27	.23	.33	.26	.22	.31	.26	.22	.20



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:DAMIN
Test Date:2025-08-08

γ Range: 0 - 180DEG
γ Interval: 5.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.464
Humidity:65.0%
Test Distance:26.000m [K=1.2600]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

WEC AND CCEC

Test:U:119.94V I:0.1254A P:14.395W PF:0.9569 Freq:60.01Hz											
Lamp Flux:1117.28x1 lm											
NAME: 8977WH-5CCT_IES											
MFR.: Royal Pacific Ltd.											

pcc	80%			70%			50%			30%			10%			0	
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
pfc	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.342	.194	.062	.332	.189	.060	.313	.180	.057	.296	.171	.055	.281	.163	.052		
2.0	.311	.170	.052	.302	.166	.051	.285	.159	.049	.270	.152	.047	.256	.145	.046		
3.0	.283	.150	.045	.275	.147	.044	.260	.141	.043	.246	.135	.041	.233	.129	.040		
4.0	.258	.134	.039	.251	.131	.039	.238	.126	.038	.225	.121	.036	.214	.116	.035		
5.0	.237	.121	.035	.230	.118	.034	.218	.114	.033	.207	.109	.032	.197	.105	.032		
6.0	.218	.109	.031	.212	.107	.031	.202	.103	.030	.191	.099	.029	.182	.096	.028		
7.0	.202	.100	.028	.197	.098	.028	.187	.095	.027	.178	.091	.027	.169	.088	.026		
8.0	.188	.092	.026	.183	.090	.026	.174	.087	.025	.166	.084	.024	.158	.081	.024		
9.0	.176	.085	.024	.172	.084	.023	.163	.081	.023	.156	.078	.022	.148	.075	.022		
10.0	.165	.079	.022	.161	.078	.022	.154	.075	.021	.146	.073	.021	.140	.070	.020		

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients (CCEC)									
0.0	.257	.257	.257	.220	.220	.220	.150	.150	.150	.086	.086	.086	.028	.028	.028	
1.0	.250	.223	.199	.214	.192	.171	.146	.132	.119	.084	.076	.069	.027	.025	.022	
2.0	.243	.200	.164	.208	.172	.141	.142	.119	.099	.082	.069	.058	.026	.022	.019	
3.0	.235	.183	.141	.202	.158	.122	.138	.109	.086	.080	.064	.050	.026	.021	.017	
4.0	.228	.170	.126	.195	.147	.109	.134	.102	.077	.078	.060	.045	.025	.019	.015	
5.0	.220	.160	.115	.189	.138	.100	.130	.096	.071	.075	.057	.042	.024	.018	.014	
6.0	.213	.151	.107	.183	.131	.094	.126	.092	.066	.073	.054	.039	.024	.018	.013	
7.0	.206	.145	.102	.177	.125	.089	.122	.088	.063	.071	.052	.037	.023	.017	.012	
8.0	.199	.139	.098	.172	.121	.085	.119	.085	.060	.069	.050	.036	.022	.016	.012	
9.0	.193	.134	.094	.166	.116	.082	.115	.082	.058	.067	.048	.035	.022	.016	.012	
10.0	.187	.130	.092	.161	.113	.080	.112	.079	.057	.065	.047	.034	.021	.015	.011	

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:DAMIN
Test Date:2025-08-08

γ Range: 0 - 180DEG
γ Interval: 5.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.464
Humidity:65.0%
Test Distance:26.000m [K=1.2600]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

UTILIZATION FACTORS TABLE

Test:U:119.94V I:0.1254A P:14.395W PF:0.9569 Freq:60.01Hz		
Lamp Flux:1117.28x1 lm		
NAME: 8977WH-5CCT_IES		
MFR.: Royal Pacific Ltd.		

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) $k(RI) \times RCR = 5$									
$k = 0.60$	53	40	33	52	40	33	50	39	33	26
0.80	62	50	42	61	49	42	59	48	41	34
1.00	70	58	50	69	57	50	66	58	49	41
1.25	77	66	58	76	65	57	72	63	56	48
1.50	83	72	64	80	70	63	76	68	61	52
2.00	90	80	73	87	78	72	83	75	69	60
2.50	94	85	78	91	83	77	86	80	74	64
3.00	98	90	83	95	87	82	89	83	79	68
4.00	102	95	90	99	93	88	93	88	84	72
5.00	105	99	94	101	96	92	95	91	88	76
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

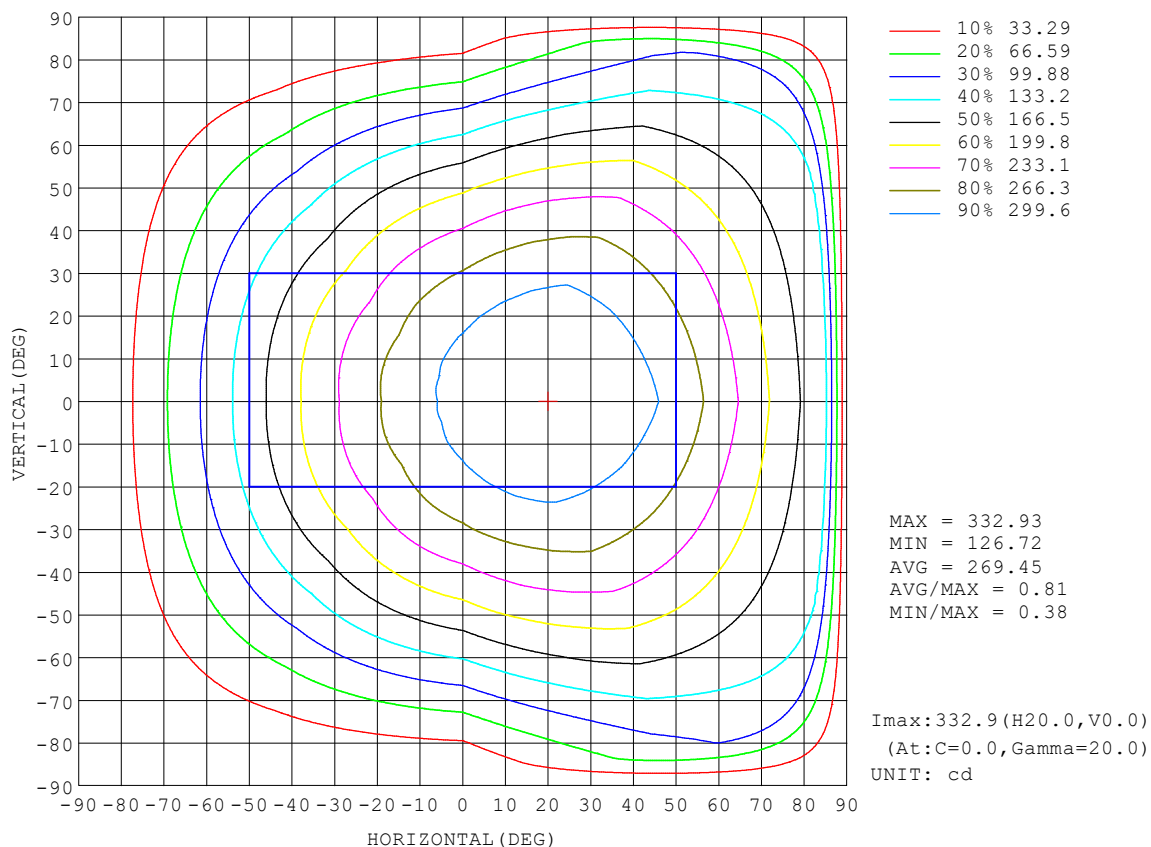
C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators: DAMIN
 Test Date: 2025-08-08

γ Range: 0 - 180DEG
 γ Interval: 5.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.464
 Humidity: 65.0%
 Test Distance: 26.000m [K=1.2600]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

ISOCANDELA DIAGRAM

Test:U:119.94V I:0.1254A P:14.395W PF:0.9569 Freq:60.01Hz		
Lamp Flux:1117.28x1 lm		
NAME: 8977WH-5CCT_IES		
MFR.: Royal Pacific Ltd.		



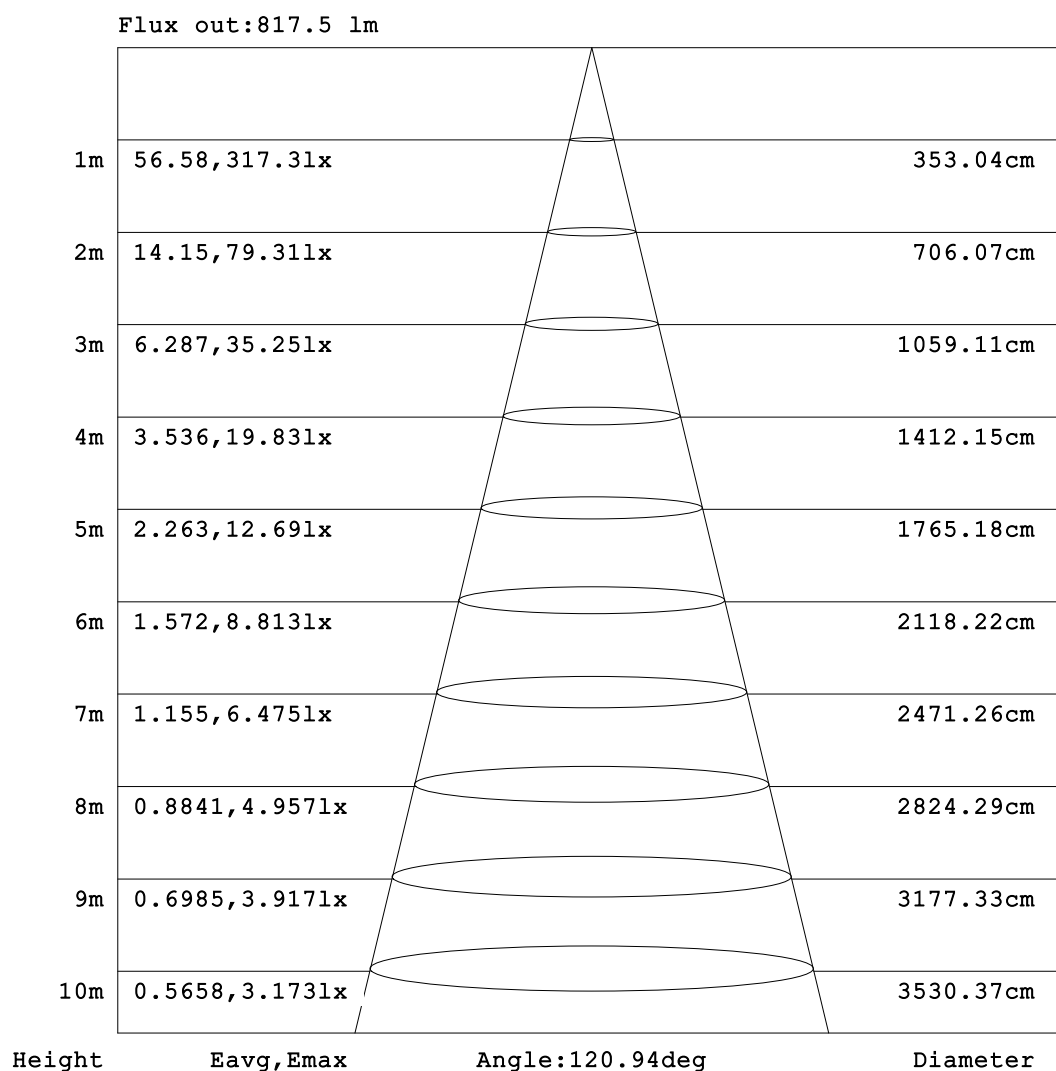
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:DAMIN
Test Date:2025-08-08

γ Range: 0 - 180DEG
γ Interval: 5.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.464
Humidity:65.0%
Test Distance:26.000m [K=1.2600]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

AAI Figure

Test:U:119.94V I:0.1254A P:14.395W PF:0.9569 Freq:60.01Hz		
Lamp Flux:1117.28x1 lm		
NAME: 8977WH-5CCT_IES		
MFR.: Royal Pacific Ltd.		



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

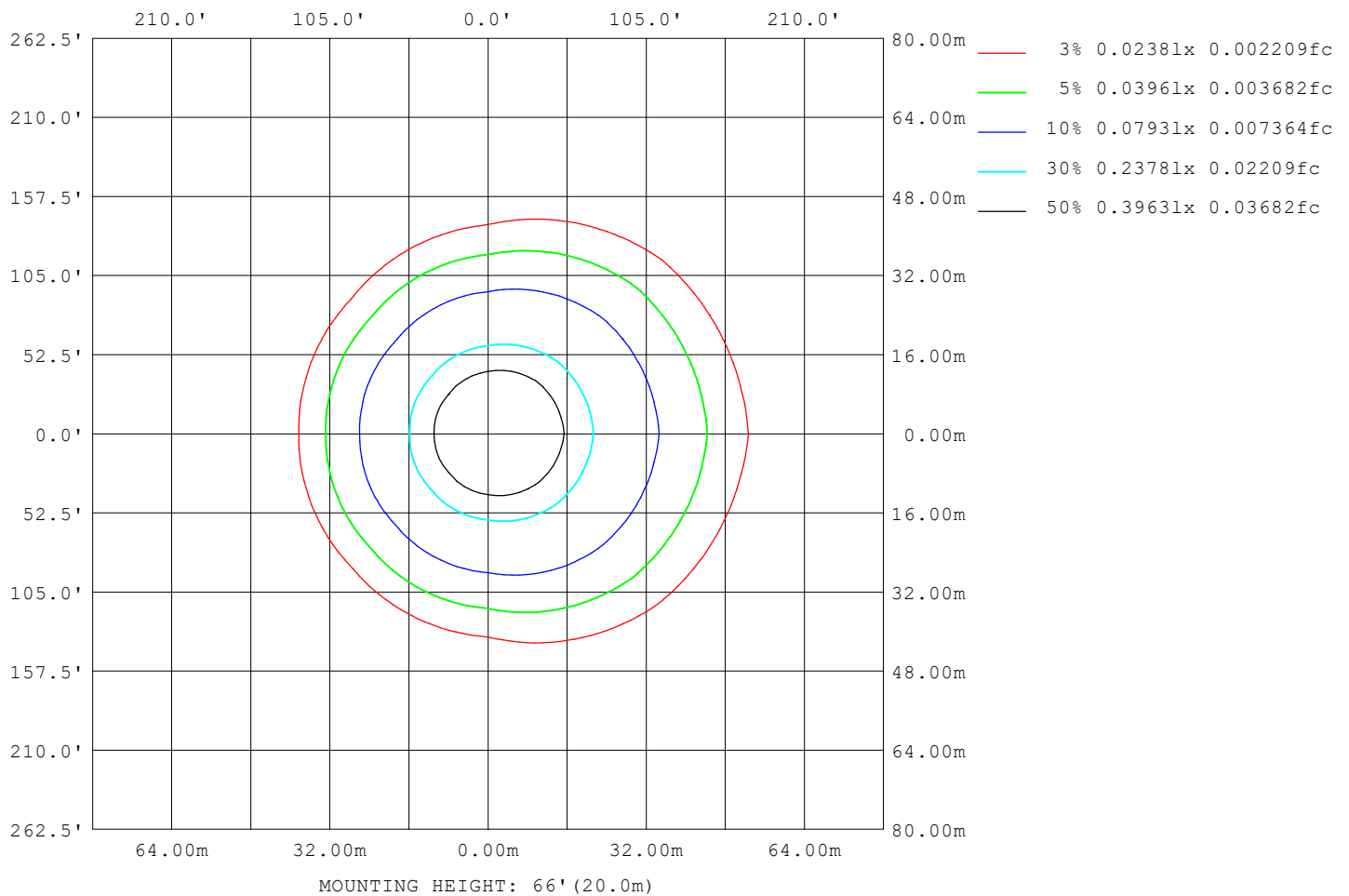
C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3℃
 Operators:DAMIN
 Test Date:2025-08-08

γ Range: 0 - 180DEG
 γ Interval: 5.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.464
 Humidity:65.0%
 Test Distance:26.000m [K=1.2600]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

ISOLUX DIAGRAM

Test:U:119.94V I:0.1254A P:14.395W PF:0.9569 Freq:60.01Hz		
Lamp Flux:1117.28x1 lm		
NAME: 8977WH-5CCT_IES		
MFR.: Royal Pacific Ltd.		



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3℃
 Operators:DAMIN
 Test Date:2025-08-08

γ Range: 0 - 180DEG
 γ Interval: 5.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.464
 Humidity:65.0%
 Test Distance:26.000m [K=1.2600]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LED Avg.L Report

Test:U:119.94V I:0.1254A P:14.395W PF:0.9569 Freq:60.01Hz		
Lamp Flux:1117.28x1 lm		
NAME: 8977WH-5CCT_IES		
MFR.: Royal Pacific Ltd.		

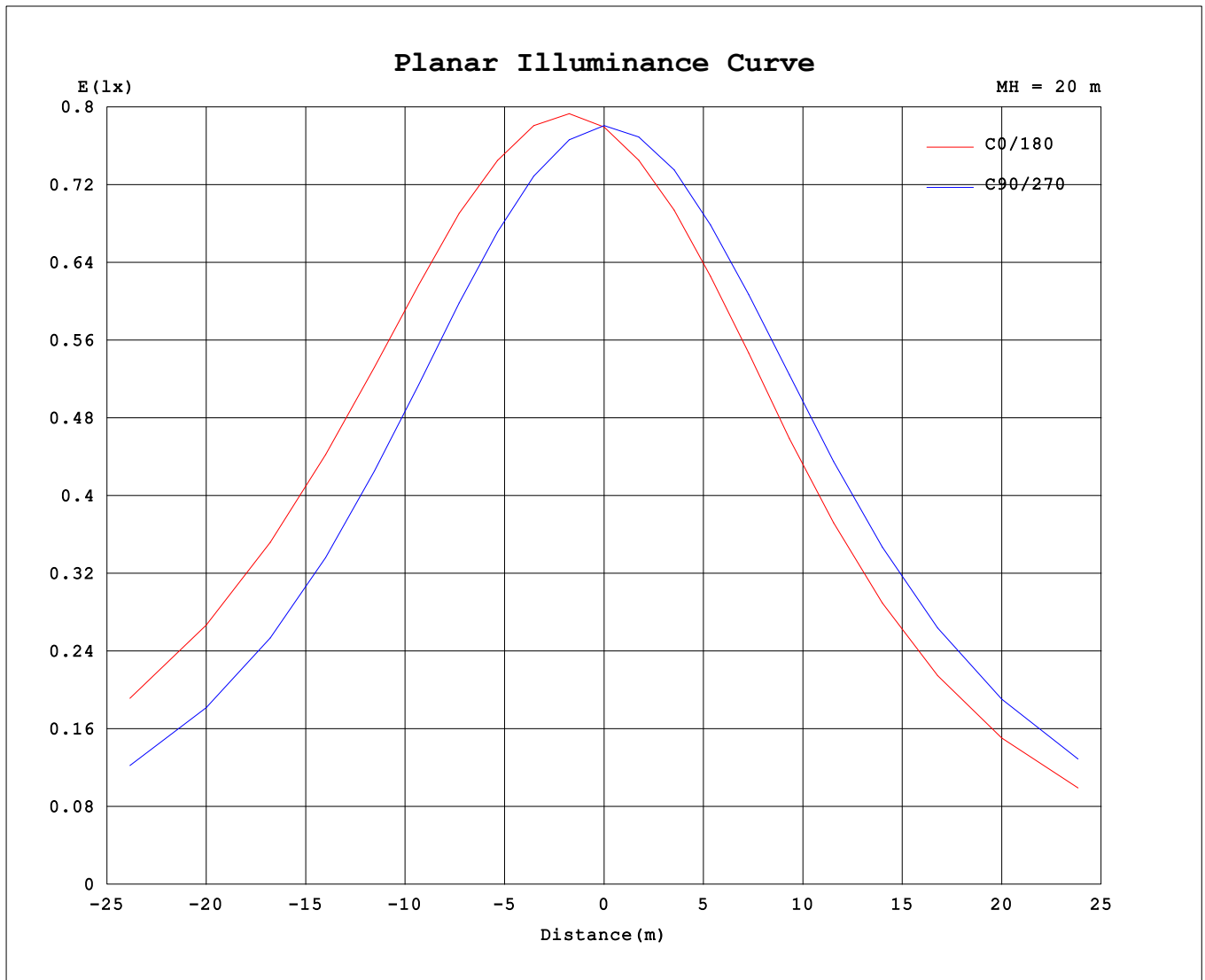
AvgL	cd/m2
L_0~180 (65) av	1985
L_0~180 (75) av	2331
L_0~180 (85) av	4474
L_90~270 (65) av	1433
L_90~270 (75) av	1237
L_90~270 (85) av	867
L_45 (65) av	1766
L_45 (75) av	1898
L_45 (85) av	2852

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:DAMIN
Test Date:2025-08-08

γ Range: 0 - 180DEG
γ Interval: 5.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.464
Humidity:65.0%
Test Distance:26.000m [K=1.2600]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: 25.3 °C
 Operators: DAMIN
 Test Date: 2025-08-08

γ Range: 0 - 180DEG
 γ Interval: 5.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.464
 Humidity: 65.0%
 Test Distance: 26.000m [K=1.2600]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:119.94V I:0.1254A P:14.395W PF:0.9569 Freq:60.01Hz		
Lamp Flux:1117.28x1 lm		
NAME: 8977WH-5CCT_IES		
MFR.: Royal Pacific Ltd.		

Table--1										UNIT: cd									
C (DEG)	0	45	90	135	180	225	270	315											
γ (DEG)	0	312	312	312	312	312	312	312											
0	312	312	312	312	312	312	312	312											
5	321	317	310	304	302	305	311	318											
10	327	320	305	294	291	296	308	321											
15	331	320	298	282	278	284	301	322											
20	333	317	288	268	264	270	292	321											
25	331	312	276	253	247	256	281	317											
30	328	303	262	236	229	238	268	311											
35	322	292	244	217	211	220	252	302											
40	313	280	225	198	191	201	235	291											
45	302	266	206	177	171	179	215	277											
50	289	249	184	155	150	157	194	261											
55	272	230	160	133	128	136	170	243											
60	252	209	135	110	106	112	146	222											
65	231	187	108	87.0	84.4	88.8	120	199											
70	209	161	81.2	64.6	63.0	65.9	92.3	174											
75	185	135	55.1	43.0	42.2	44.1	65.5	148											
80	163	108	30.8	23.4	22.9	24.2	39.8	121											
85	140	79.8	10.8	7.40	6.53	7.81	17.6	92.0											
90	3.15	1.79	0.00	0.00	0.00	0.00	0.04	2.62											
95	103	60.4	0.00	0.00	0.00	0.00	0.77	71.0											
100	103	56.5	0.00	0.00	0.00	0.00	0.38	67.5											
105	93.9	49.9	0.00	0.00	0.00	0.00	0.00	60.5											
110	84.3	44.8	0.00	0.00	0.00	0.00	0.00	53.8											
115	75.0	40.3	0.00	0.00	0.00	0.00	0.00	47.5											
120	66.8	35.6	0.00	0.00	0.00	0.00	0.00	41.0											
125	58.8	31.0	0.00	0.00	0.00	0.00	0.00	33.1											
130	50.9	26.6	0.00	0.00	0.00	0.00	0.00	25.5											
135	43.3	22.0	0.00	0.00	0.00	0.00	0.08	17.6											
140	36.1	17.8	0.00	0.00	0.00	0.00	0.15	10.7											
145	29.0	13.8	0.00	0.00	0.00	0.00	0.15	0.33											
150	21.9	9.09	0.00	0.00	0.00	0.00	0.15	0.38											
155	15.3	0.62	0.00	0.00	0.00	0.00	0.15	0.00											
160	1.80	1.77	0.00	0.00	0.00	0.00	0.15	0.00											
165	2.27	0.54	0.00	0.00	0.00	0.08	0.31	0.00											
170	0.47	0.54	0.00	0.00	0.00	0.31	0.38	0.00											
175	0.46	0.54	0.00	0.00	0.00	0.31	0.46	0.00											
180	0.46	0.54	0.00	0.00	0.00	0.39	0.53	0.00											
C Range: 0 - 360DEG										γ Range: 0 - 180DEG									

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:DAMIN
Test Date:2025-08-08

γ Range: 0 - 180DEG
γ Interval: 5.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.464
Humidity:65.0%
Test Distance:26.000m [K=1.2600]
Remarks: