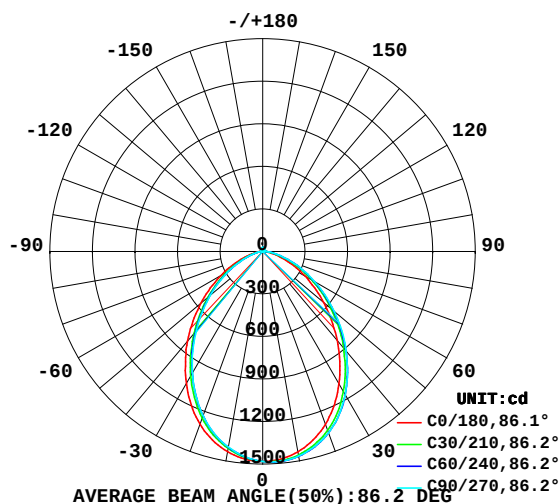


LUMINAIRE PHOTOMETRIC TEST REPORT

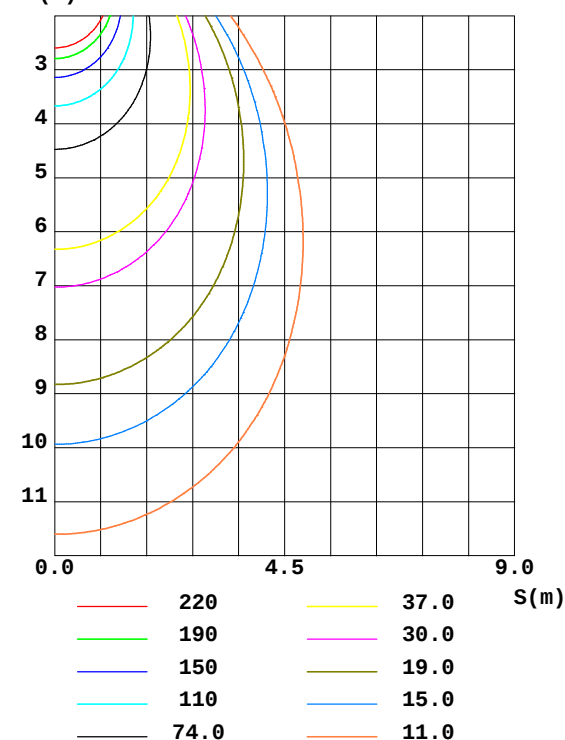
Test:U:220.6V I:0.1220A P:26.10W PF:0.9700 Lamp Flux:3086.52x1 lm		
NAME: PSJU-DL-30W-SMD	TYPE: LED	
MFR.:		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 118.26 lm/W			
MODEL	PSJU-DL-30W-SMD	I _{max} (cd)	1487	S/MH(C0/180)	1.11
NOMINAL POWER(W)	30	LOR(%)	100.0	S/MH(C90/270)	1.18
RATED VOLTAGE(V)	220.6	TOTAL FLUX(lm)	3086.5	η UP, DN(C0-180)	1.4, 51.8
NOMINAL FLUX(lm)	3086.52	CIE CLASS	DIRECT	η UP, DN(C180-360)	1.6, 45.2
LAMPS INSIDE	1	η up(%)	3.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	220.6	η down(%)	97.0	CIBSE SHR MAX	1.25

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2017-07-19

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.267
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	1435	1462	1465	1443	1434	1406	1400	1422	0- 10	139.1	139.1	4.51,4.51
20	1297	1351	1359	1317	1296	1242	1233	1275	10- 20	386.9	526.0	17,17
30	1077	1152	1165	1105	1077	1005	992.4	1048	20- 30	548.7	1075	34.8,34.8
40	817.7	901.2	915.0	852.8	825.4	744.6	729.2	791.8	30- 40	594.3	1669	54.1,54.1
50	563.3	642.6	661.2	596.1	572.1	497.9	483.3	540.7	40- 50	535.0	2204	71.4,71.4
60	342.6	405.7	421.1	367.4	343.1	285.7	276.8	321.1	50- 60	405.0	2609	84.5,84.5
70	161.2	211.8	222.3	180.9	161.8	121.2	115.9	146.5	60- 70	247.9	2857	92.6,92.6
80	49.87	74.75	80.47	59.10	50.38	34.73	32.37	45.31	70- 80	107.9	2965	96.1,96.1
90	5.510	15.24	17.65	8.752	7.376	7.900	8.131	7.848	80- 90	29.87	2995	97,97
100	7.349	6.758	6.819	7.453	9.077	9.822	10.07	9.563	90-100	8.564	3003	97.3,97.3
110	10.02	9.217	9.212	9.948	11.48	12.33	12.54	11.89	100-110	10.11	3013	97.6,97.6
120	13.14	12.21	12.13	12.88	14.26	15.15	15.34	14.59	110-120	12.14	3025	98,98
130	16.38	15.47	15.33	16.00	17.07	17.91	18.07	17.25	120-130	13.61	3039	98.5,98.5
140	19.44	18.62	18.43	18.92	19.72	20.41	20.51	19.70	130-140	13.97	3053	98.9,98.9
150	22.26	21.60	21.35	21.66	22.18	22.66	22.68	21.94	140-150	13.00	3066	99.3,99.3
160	24.90	24.27	23.98	24.12	24.65	24.76	24.73	24.15	150-160	10.72	3077	99.7,99.7
170	27.14	26.56	26.19	26.21	26.91	26.75	26.63	26.28	160-170	7.198	3084	99.9,99.9
180	28.15	27.70	27.41	27.29	28.17	27.71	27.39	27.28	170-180	2.584	3087	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:2017-07-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.267
 Humidity:65.0%
 Test Distance:8.000m [K=0.7063]
 Remarks:

Range: 0 - 180DEG
Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.267
Humidity:65.0%
Test Distance:8.000m [K=0.7063]
Remarks:

WEC AND CCEC

Test:U:220.6V I:0.1220A P:26.10W PF:0.9700 Lamp Flux:3086.52x1 lm											
NAME: PSJU-DL-30W-SMD						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	.265	.151	.048	.258	.147	.047	.243	.139	.044	.229	.132	.042	.217	.126	.041	
2.0	.254	.139	.043	.247	.136	.042	.234	.130	.040	.222	.125	.039	.211	.119	.038	
3.0	.239	.127	.038	.232	.124	.037	.221	.120	.036	.210	.115	.035	.201	.111	.034	
4.0	.223	.116	.034	.218	.114	.034	.207	.110	.033	.198	.106	.032	.189	.103	.031	
5.0	.208	.106	.031	.204	.105	.030	.195	.101	.030	.186	.098	.029	.178	.095	.029	
6.0	.195	.098	.028	.191	.096	.028	.183	.094	.027	.175	.091	.027	.168	.088	.026	
7.0	.183	.090	.026	.179	.089	.025	.172	.087	.025	.165	.085	.025	.159	.082	.024	
8.0	.172	.084	.024	.169	.083	.023	.162	.081	.023	.156	.079	.023	.150	.077	.022	
9.0	.162	.078	.022	.159	.078	.022	.153	.076	.021	.147	.074	.021	.142	.072	.021	
10.0	.153	.073	.020	.150	.073	.020	.145	.071	.020	.140	.069	.020	.135	.068	.019	

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	.213	.213	.213	.182	.182	.182	.124	.124	.124	.071	.071	.071	.023	.023	.023	
1.0	.200	.179	.161	.171	.154	.138	.117	.106	.096	.067	.061	.056	.022	.020	.018	
2.0	.190	.155	.126	.163	.134	.109	.112	.092	.076	.064	.054	.044	.021	.017	.014	
3.0	.182	.137	.102	.156	.118	.088	.107	.082	.062	.062	.048	.037	.020	.016	.012	
4.0	.174	.124	.085	.149	.107	.074	.102	.074	.052	.059	.044	.031	.019	.014	.010	
5.0	.166	.113	.074	.143	.098	.064	.098	.068	.045	.057	.040	.027	.018	.013	.009	
6.0	.159	.105	.065	.137	.091	.057	.095	.063	.040	.055	.037	.024	.018	.012	.008	
7.0	.153	.098	.059	.132	.085	.051	.091	.059	.036	.053	.035	.022	.017	.011	.007	
8.0	.147	.092	.054	.126	.080	.047	.087	.056	.033	.051	.033	.020	.016	.011	.007	
9.0	.141	.087	.050	.122	.075	.044	.084	.053	.031	.049	.031	.019	.016	.010	.006	
10.0	.136	.083	.047	.117	.072	.041	.081	.050	.029	.047	.030	.017	.015	.010	.006	

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2017-07-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity: 65.0%
Test Distance: 8.000m [K=0.7063]
Remarks:

Uncorrected UGR Table

Test:U:220.6V I:0.1220A P:26.10W PF:0.9700 Lamp Flux:3086.52x1 lm										
NAME: PSJU-DL-30W-SMD					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	24.0	25.4	24.3	25.6	25.9	24.6	26.0	24.9	26.2	26.5
3H	24.8	26.0	25.1	26.3	26.6	25.7	26.9	26.0	27.2	27.5
4H	25.0	26.2	25.4	26.5	26.8	26.0	27.2	26.4	27.5	27.8
6H	25.1	26.2	25.5	26.5	26.9	26.2	27.3	26.6	27.6	28.0
8H	25.1	26.2	25.5	26.5	26.9	26.3	27.3	26.7	27.7	28.0
12H	25.1	26.1	25.5	26.5	26.8	26.3	27.3	26.7	27.7	28.0
4H 2H	24.5	25.7	24.9	26.0	26.3	25.0	26.2	25.4	26.5	26.8
3H	25.5	26.5	25.9	26.8	27.2	26.2	27.2	26.6	27.6	27.9
4H	25.8	26.7	26.2	27.1	27.5	26.7	27.6	27.1	28.0	28.4
6H	26.0	26.8	26.4	27.2	27.6	27.0	27.8	27.4	28.2	28.6
8H	26.0	26.8	26.5	27.2	27.7	27.1	27.9	27.6	28.3	28.7
12H	26.1	26.8	26.5	27.2	27.7	27.2	27.9	27.7	28.3	28.8
8H 4H	26.0	26.7	26.4	27.2	27.6	26.8	27.5	27.2	27.9	28.4
6H	26.3	26.9	26.8	27.4	27.8	27.2	27.8	27.7	28.3	28.8
8H	26.4	26.9	26.9	27.4	27.9	27.4	27.9	27.9	28.4	28.9
12H	26.5	27.0	27.0	27.5	28.0	27.6	28.0	28.1	28.5	29.1
12H 4H	26.0	26.7	26.5	27.1	27.6	26.8	27.4	27.2	27.9	28.3
6H	26.3	26.9	26.8	27.3	27.9	27.2	27.8	27.7	28.2	28.8
8H	26.5	26.9	27.0	27.4	28.0	27.4	27.9	28.0	28.4	28.9
Variations with the observer position at spacings:										
S = 1.0H	+ 0.4 / - 0.5					+ 0.3 / - 0.3				
1.5H	+ 0.2 / - 0.4					+ 0.1 / - 0.3				
2.0H	+ 0.4 / - 0.8					+ 0.5 / - 0.4				

CIE Pub.117 Corrected 3087 lm Total Lamp Luminous Flux. (8log(F/F0) = 3.9)

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2017-07-19

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity: 65.0%
Test Distance: 8.000m [K=0.7063]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:220.6V I:0.1220A P:26.10W PF:0.9700 Lamp Flux:3086.52x1 lm		
NAME: PSJU-DL-30W-SMD	TYPE: LED	
MFR.:		

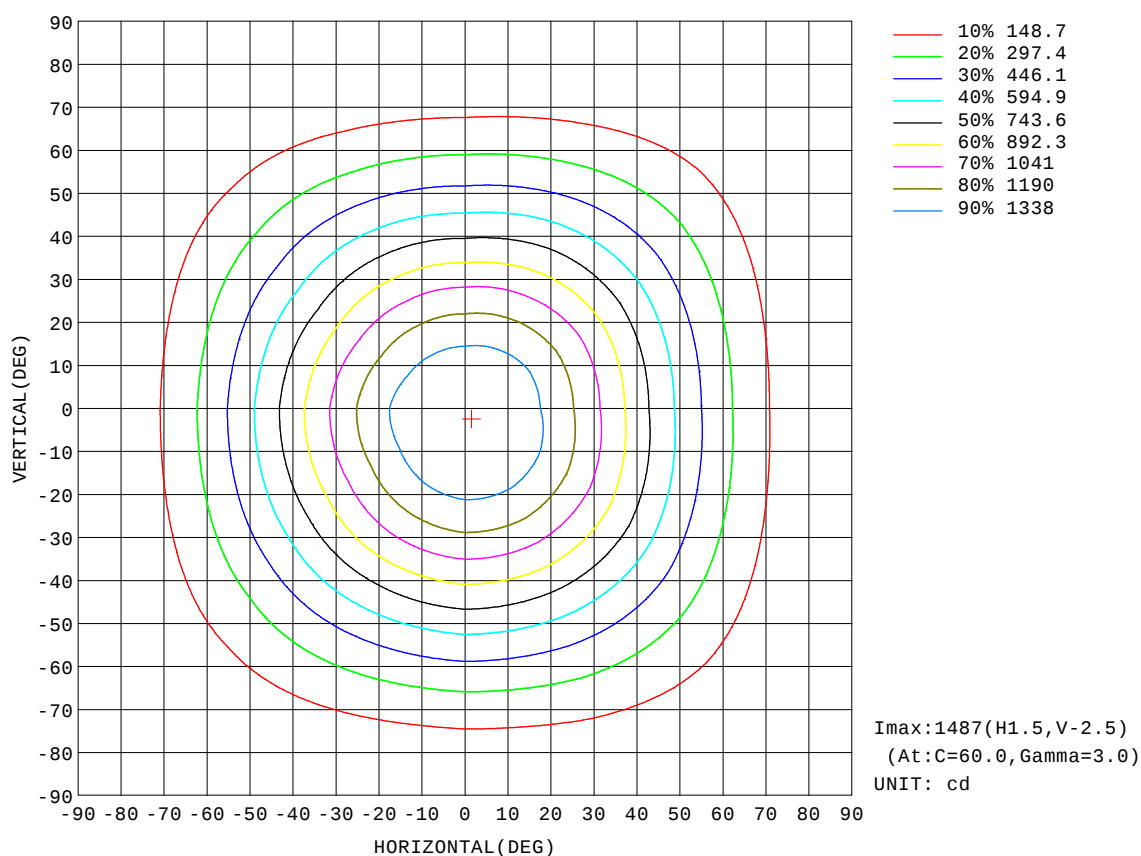
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	63	52	46	62	52	46	61	51	46	40
0.80	73	62	56	72	62	56	70	61	55	49
1.00	81	71	65	80	70	64	77	71	64	57
1.25	87	78	72	86	77	72	83	76	71	64
1.50	92	83	77	90	82	77	87	80	75	68
2.00	98	91	85	96	89	84	92	87	82	75
2.50	101	95	89	99	93	88	95	90	86	78
3.00	104	98	94	102	97	92	98	93	90	81
4.00	108	103	99	105	101	97	100	97	94	85
5.00	110	105	102	107	103	100	102	99	97	87
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: 2017-07-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.267
Humidity: 65.0%
Test Distance: 8.000m [K=0.7063]
Remarks:

ISOCANDELA DIAGRAM

Test:U:220.6V I:0.1220A P:26.10W PF:0.9700 Lamp Flux:3086.52x1 lm		
NAME: PSJU-DL-30W-SMD	TYPE: LED	
MFR.:		



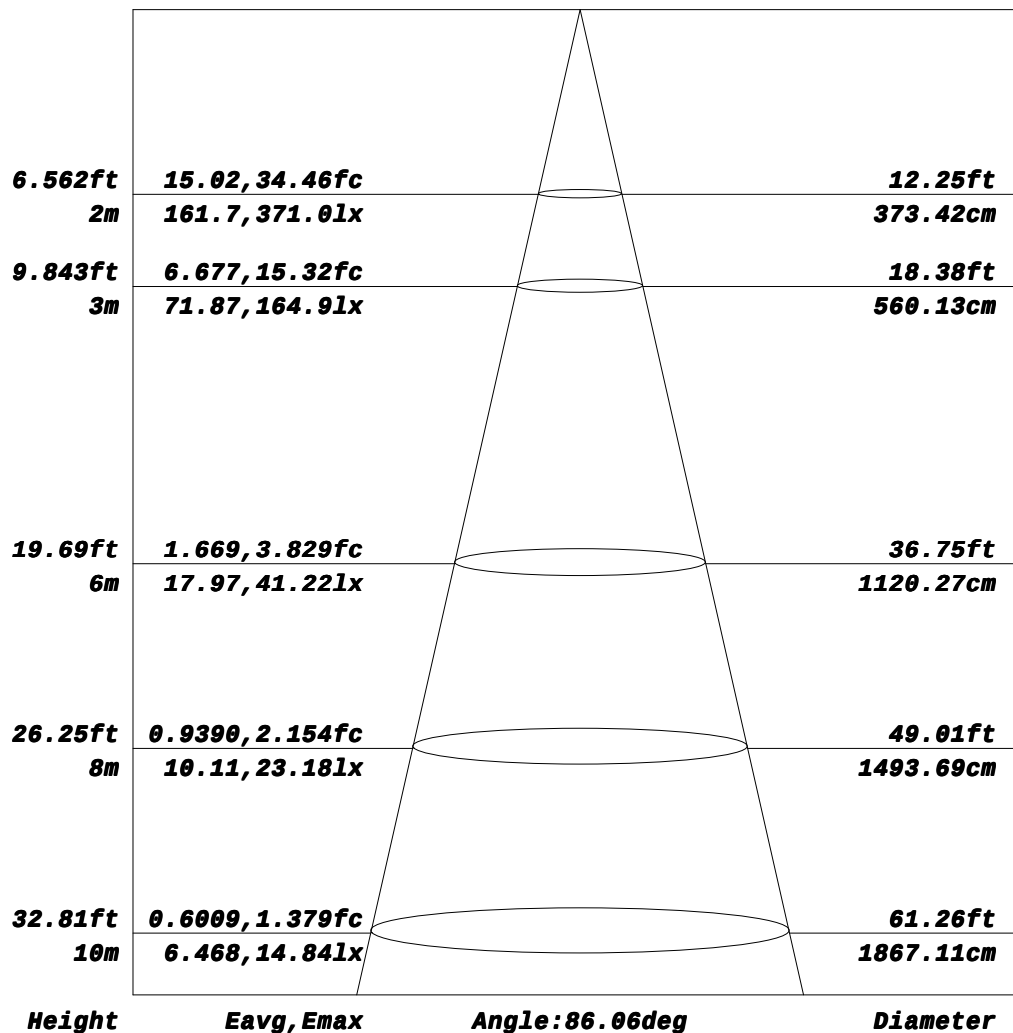
C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2017-07-19

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.267
Humidity:65.0%
Test Distance:8.000m [K=0.7063]
Remarks:

AAI Figure

Test:U:220.6V I:0.1220A P:26.10W PF:0.9700 Lamp Flux:3086.52x1 lm		
NAME: PSJU-DL-30W-SMD	TYPE: LED	
MFR.:		

Flux out:1895 lm



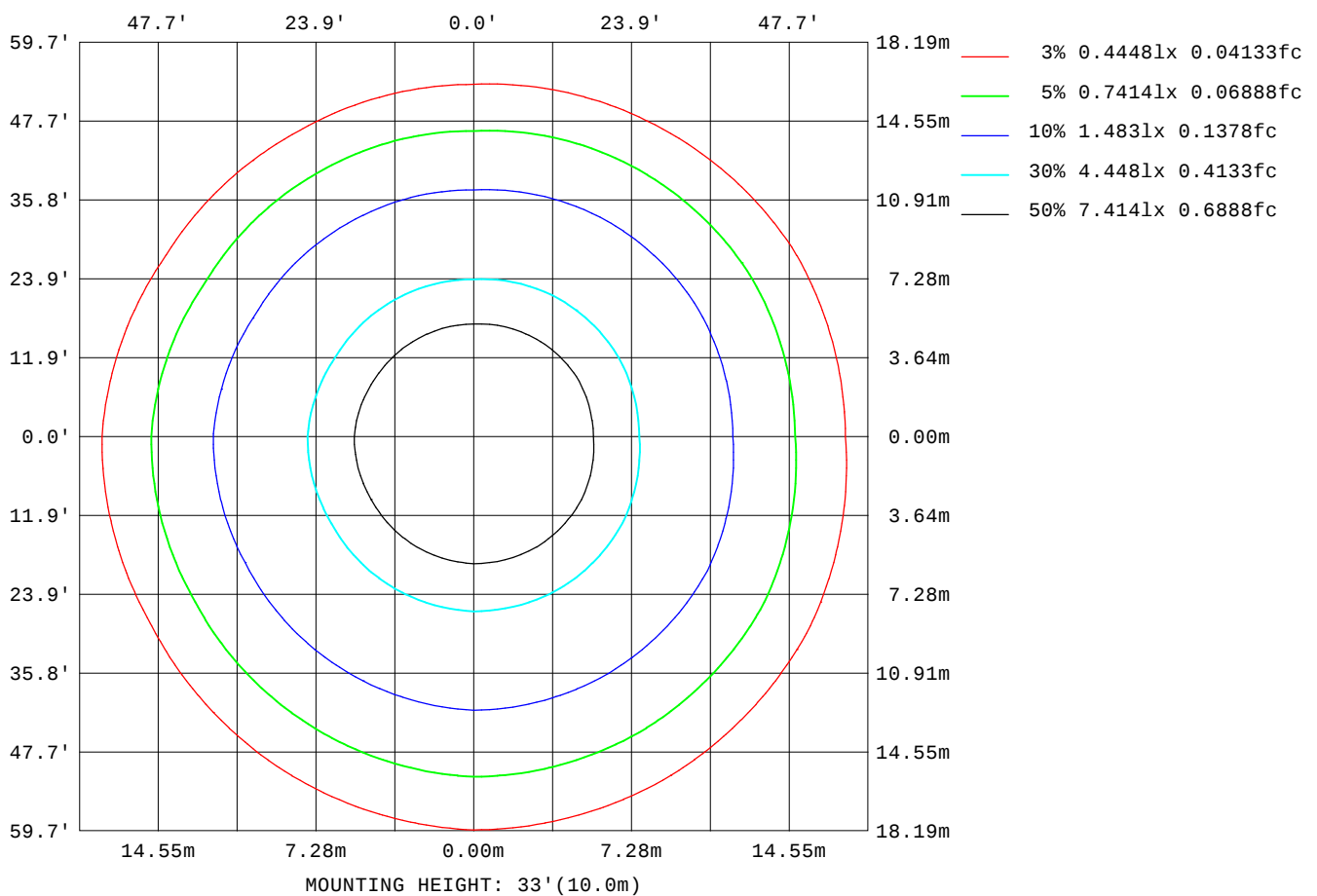
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2017-07-19

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.267
Humidity: 65.0%
Test Distance: 8.000m [K=0.7063]
Remarks:

ISOLUX DIAGRAM

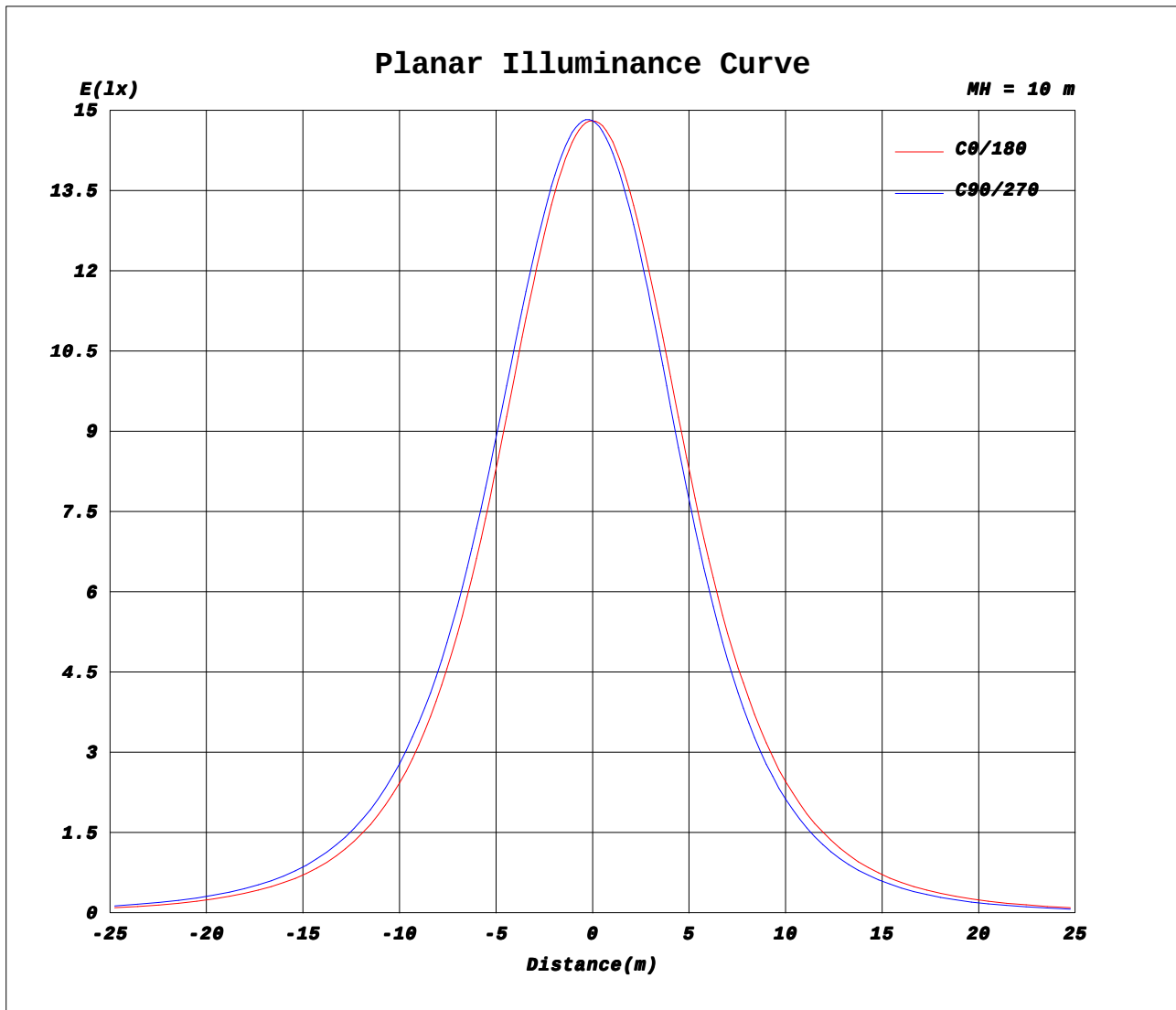
Test:U:220.6V I:0.1220A P:26.10W PF:0.9700 Lamp Flux:3086.52x1 lm		
NAME: PSJU-DL-30W-SMD	TYPE: LED	
MFR.:		



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2017-07-19

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.267
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: 2017-07-19

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.267
Humidity: 65.0%
Test Distance: 8.000m [K=0.7063]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:220.6V I:0.1220A P:26.10W PF:0.9700 Lamp Flux:3086.52x1 lm											
NAME: PSJU-DL-30W-SMD						TYPE: LED					
MFR.:											

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330								
0	1481	1481	1481	1481	1481	1480	1481	1481	1481	1481	1481	1480								
5	1470	1481	1485	1485	1478	1469	1469	1458	1453	1452	1459	1467								
10	1435	1458	1466	1465	1452	1435	1434	1409	1403	1400	1415	1429								
15	1377	1411	1425	1423	1404	1379	1377	1342	1330	1328	1348	1371								
20	1297	1341	1360	1359	1334	1301	1296	1251	1233	1233	1260	1290								
25	1196	1250	1274	1272	1240	1200	1195	1139	1119	1118	1150	1187								
30	1077	1140	1165	1165	1128	1083	1077	1016	993	992	1027	1070								
35	950	1015	1043	1044	1004	956	950	885	869	861	903	941								
40	818	889	913	915	873	833	825	753	736	729	773	811								
45	688	760	781	789	741	702	696	626	609	603	647	681								
50	563	633	653	661	616	576	572	505	491	483	525	556								
55	446	510	530	537	495	458	452	392	378	375	408	440								
60	343	396	415	421	386	349	343	294	277	277	304	338								
65	245	293	315	316	286	250	246	204	188	189	212	242								
70	161	202	222	222	196	166	162	127	115	116	134	159								
75	94.7	127	142	143	121	98.5	95.9	70.6	62.0	63.1	76.7	93.5								
80	49.9	69.5	80.0	80.5	66.3	51.9	50.4	36.8	32.6	32.4	40.8	49.9								
85	23.9	36.0	41.6	41.4	34.2	25.3	25.0	14.2	10.8	10.3	17.2	24.6								
90	5.51	12.9	17.6	17.7	11.5	5.95	7.38	7.79	8.01	8.13	7.95	7.75								
95	6.31	5.89	5.81	5.96	6.31	6.70	8.13	8.65	8.90	9.01	8.75	8.48								
100	7.35	6.82	6.69	6.82	7.23	7.68	9.08	9.69	9.96	10.1	9.74	9.39								
105	8.61	7.99	7.82	7.93	8.38	8.87	10.2	10.9	11.2	11.3	10.9	10.5								
110	10.0	9.33	9.11	9.21	9.68	10.2	11.5	12.2	12.5	12.5	12.1	11.7								
115	11.5	10.8	10.5	10.6	11.1	11.7	12.8	13.6	13.9	13.9	13.5	12.9								
120	13.1	12.3	12.1	12.1	12.6	13.2	14.3	15.0	15.3	15.3	14.9	14.3								
125	14.8	14.0	13.7	13.7	14.2	14.7	15.7	16.4	16.7	16.7	16.2	15.7								
130	16.4	15.6	15.3	15.3	15.8	16.2	17.1	17.8	18.0	18.1	17.5	17.0								
135	17.9	17.2	16.9	16.9	17.2	17.7	18.4	19.1	19.3	19.3	18.8	18.2								
140	19.4	18.8	18.4	18.4	18.7	19.1	19.7	20.3	20.5	20.5	20.0	19.4								
145	20.8	20.3	19.9	19.9	20.1	20.5	21.0	21.5	21.7	21.6	21.1	20.6								
150	22.3	21.8	21.4	21.4	21.5	21.8	22.2	22.6	22.7	22.7	22.2	21.7								
155	23.6	23.2	22.8	22.7	22.8	23.0	23.4	23.6	23.8	23.7	23.3	22.8								
160	24.9	24.4	24.1	24.0	24.0	24.2	24.7	24.7	24.8	24.7	24.3	24.0								
165	26.1	25.7	25.3	25.1	25.1	25.4	25.8	25.8	25.8	25.7	25.4	25.1								
170	27.1	26.8	26.4	26.2	26.2	26.3	26.9	26.8	26.7	26.6	26.4	26.2								
175	27.9	27.6	27.2	27.0	27.0	27.0	27.9	27.7	27.5	27.4	27.2	27.1								
180	28.2	27.9	27.5	27.4	27.3	27.3	28.2	27.9	27.6	27.4	27.3	27.3								

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2017-07-19

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity: 65.0%
Test Distance: 8.000m [K=0.7063]
Remarks: