

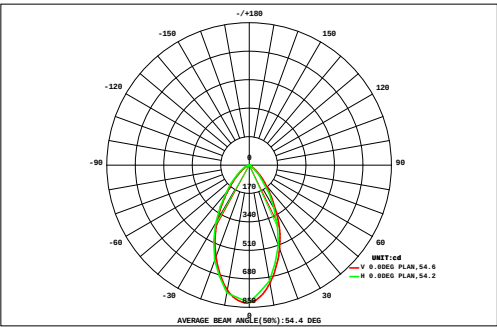
Floodlight Summary:

Report based on lamp delivering 1000 lumens.

Maximum Intensity (Luminaire orientation as tested.)		1085.2 cd per klm. 0.0 degrees vertical 0.0 degrees horizontal
Beam Spread	At 10% of Imax	97.0V x 97.4H
	At 50% of Imax	54.2V x 54.6H
	At 90% of Imax	19.0V x 19.5H
Beam Flux	Total	998.8 lumens per klm.
	To 10% of Imax	925.5 lumens per klm.
	To 50% of Imax	532.3 lumens per klm.
	To 90% of Imax	85.3 lumens per klm.
Upward LOR		0.0 %
Downward LOR		99.9 %
Luminaire Efficiency(Light Output Ratio)		100.0 %

LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:120.4V I:0.2543A P:18.27W PF:0.5968 Freq:50.00Hz Lamp Flux:758.843x1 lm		
NAME: SP-PZT-R110-3P-RDM-2	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:2025080046
MFR.: TPK OPTOELECTRONIC TECH CO., LTD	SUR.:	Shielding Angle:



DATA OF LAMP		Eff:41.53lm/W	
MODE	SP-PZT-R110-3P-RDM-2	Imax(cd)	823.5
NOMINAL POWER(W)	18	AVAILABILITY(%)	92.8
RATED VOLTAGE(V)	120	Avai. FLUX(lm)	704.5
NOMINAL FLUX(lm)	758.843	LOR(%)	100.0
LAMPS INSIDE	1	TOTAL FLUX(lm)	758.8
TEST VOLTAGE(V)	120	θ @50%(H,V)	55,54DEG

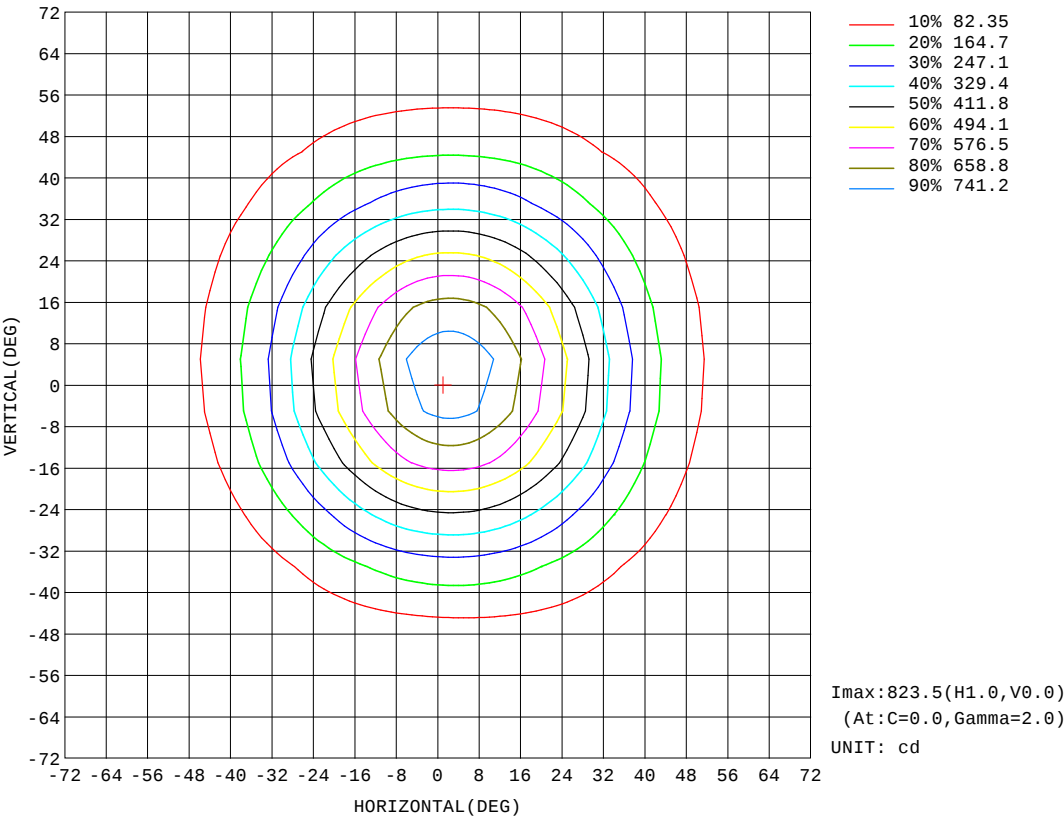
AREA FLUX DIAGRAM																	UNIT:lm		Φ t	Φ a	
VERTICAL (DEG)	72	0.00	0.00	0.00	0.00	0.01	0.07	0.19	0.28	0.34	0.35	0.33	0.27	0.20	0.12	0.03	0.01	0.00	0.00	2.21	0.00
	64	0.00	0.00	0.00	0.06	0.22	0.41	0.58	0.72	0.80	0.80	0.76	0.66	0.52	0.38	0.24	0.10	0.00	0.00	6.24	0.00
	56	0.00	0.00	0.05	0.21	0.47	0.78	1.11	1.42	1.60	1.64	1.52	1.27	0.96	0.67	0.43	0.23	0.06	0.00	12.4	3.75
	48	0.00	0.01	0.14	0.41	0.81	1.36	1.99	2.58	2.98	3.07	2.81	2.29	1.67	1.10	0.66	0.36	0.14	0.01	22.4	17.7
	40	0.00	0.03	0.27	0.65	1.31	2.28	3.40	4.47	5.20	5.33	4.82	3.82	2.69	1.67	0.93	0.48	0.20	0.02	37.6	34.4
	32	0.00	0.07	0.37	0.93	1.94	3.44	5.29	7.10	8.33	8.54	7.66	5.94	4.06	2.44	1.30	0.62	0.26	0.04	58.3	55.9
	24	0.00	0.09	0.47	1.21	2.57	4.66	7.35	9.78	11.4	11.7	10.5	8.35	5.70	3.32	1.70	0.78	0.31	0.05	79.9	77.9
		0.00	0.09	0.51	1.38	3.00	5.55	8.70	11.7	13.9	14.3	12.8	10.1	7.00	4.05	2.04	0.91	0.34	0.07	96.5	94.7
		0.00	0.08	0.53	1.48	3.25	6.09	9.46	12.7	15.2	15.8	14.0	10.9	7.59	4.40	2.20	0.95	0.35	0.06	105	103
		0.00	0.08	0.52	1.50	3.29	6.14	9.44	12.6	15.0	15.4	13.5	10.5	7.22	4.16	2.05	0.87	0.30	0.05	103	101
		0.00	0.03	0.38	1.23	2.80	5.22	8.10	10.7	12.6	13.0	11.6	9.18	6.37	3.65	1.82	0.77	0.26	0.04	87.8	86.1
	-24	0.00	0.00	0.21	0.83	1.99	3.78	6.05	8.22	9.59	9.86	8.99	7.13	4.88	2.85	1.43	0.61	0.20	0.02	66.6	64.7
	-32	0.00	0.00	0.07	0.45	1.22	2.42	3.91	5.38	6.38	6.60	6.01	4.77	3.28	1.96	1.00	0.43	0.13	0.01	44.0	41.6
	-40	0.00	0.00	0.01	0.16	0.57	1.26	2.12	2.95	3.53	3.68	3.33	2.64	1.83	1.10	0.57	0.24	0.05	0.00	24.0	20.7
	-48	0.00	0.00	0.00	0.01	0.12	0.41	0.83	1.22	1.46	1.52	1.41	1.15	0.81	0.48	0.23	0.08	0.01	0.00	9.75	2.67
	-56	0.00	0.00	0.00	0.00	0.00	0.02	0.11	0.22	0.33	0.40	0.41	0.36	0.28	0.18	0.08	0.01	0.00	0.00	2.39	0.00
-64	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.03	0.05	0.06	0.07	0.06	0.05	0.03	0.02	0.00	0.00	0.00	0.39	0.00	
-72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	-72	-64	-56	-48	-40	-32	-24	-16	HORIZONTAL(DEG)				16	24	32	40	48	56	64	72	
Φ t	0.00	0.48	3.52	10.5	23.6	43.9	68.7	92.1	109	112	101	79.4	55.1	32.6	16.7	7.45	2.60	0.35	758	---	
Φ a	0.00	0.00	0.00	5.60	20.1	40.9	65.5	89.1	106	109	97.5	76.1	51.7	28.8	12.5	1.51	0.00	0.00	---	705	

one-half-peak spread: U:24.8,D:29.8 , L:27.1,R:27.8 NEMA Beam Type: Type 5

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
 Test Speed: HIGH
 Temperature:28.0DEG
 Operators:QC1
 Test Date:2025-08-06
V(B) Range:-80 - 80DEG
V(B) Interval: 5.0DEG
 Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.354
 Humidity:83%
 Test Distance:8.300m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:120.4V I:0.2543A P:18.27W PF:0.5968 Freq:50.00Hz Lamp Flux:758.843x1 lm		
NAME: SP-PZT-R110-3P-RDM-2	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:2025080046
MFR.: TPK OPTOELECTRONIC TECH CO., LTD	SUR.:	Shielding Angle:

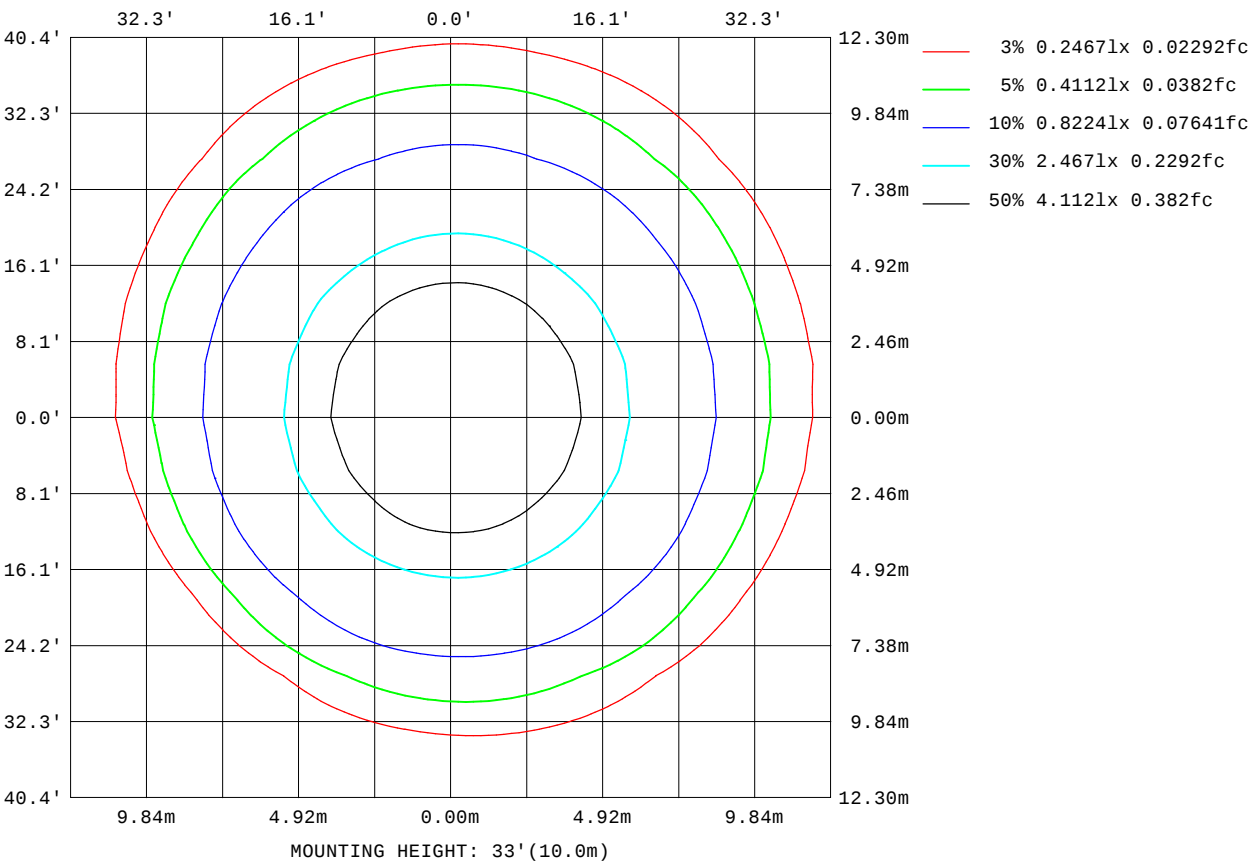


H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:28.0DEG
Operators:QC1
Test Date:2025-08-06

V(B) Range:-80 - 80DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.354
Humidity:83%
Test Distance:8.300m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

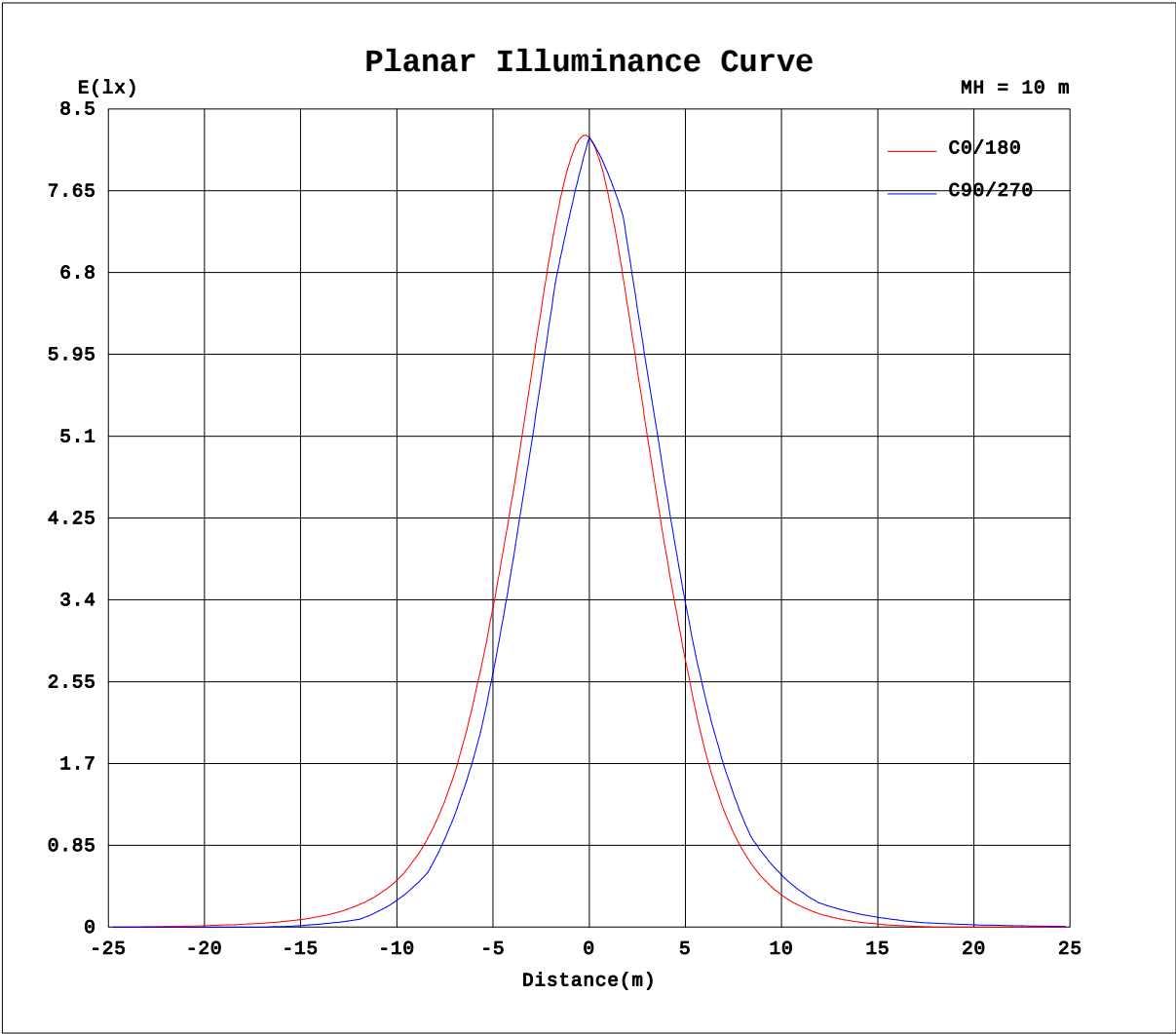
Test:U:120.4V I:0.2543A P:18.27W PF:0.5968 Freq:50.00Hz Lamp Flux:758.843x1 lm		
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SPEC.:	DIM.:	SERIAL No.:2025080046
MFR.: TPK OPTOELECTRONIC TECH CO., LTD	SUR.:	Shielding Angle:



H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:28.0DEG
Operators:QC1
Test Date:2025-08-06

V(B) Range:-80 - 80DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.354
Humidity:83%
Test Distance:8.300m [K=1.0000]
Remarks:

Planar Illuminance Curve

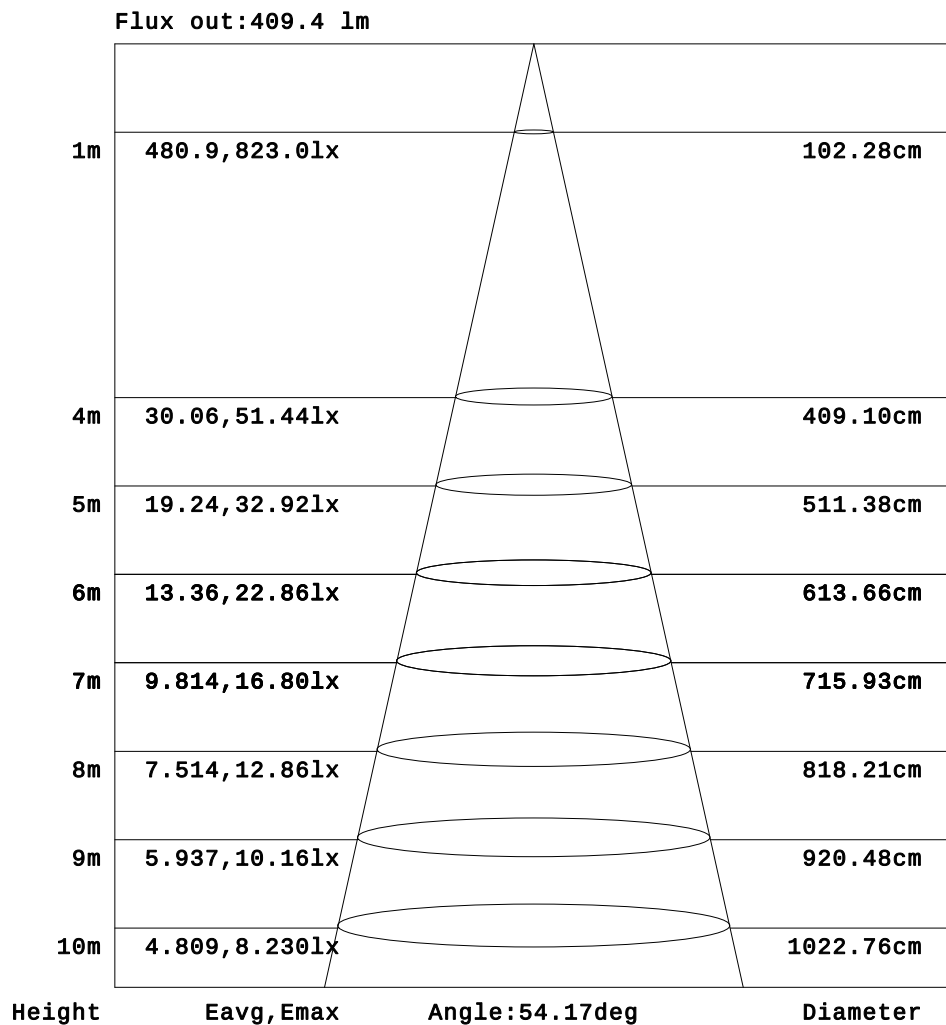


H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:28.0DEG
Operators:QC1
Test Date:2025-08-06

V(B) Range:-80 - 80DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.354
Humidity:83%
Test Distance:8.300m [K=1.0000]
Remarks:

AAI Figure

Test:U:120.4V I:0.2543A P:18.27W PF:0.5968 Freq:50.00Hz Lamp Flux:758.843x1 lm		
NAME: SP-PZT-R110-3P-RDM-2	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:2025080046
MFR.: TPK OPTOELECTRONIC TECH CO., LTD	SUR.:	Shielding Angle:



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

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:28.0DEG
Operators:QC1
Test Date:2025-08-06

V(B) Range:-80 - 80DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.354
Humidity:83%
Test Distance:8.300m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.4V I:0.2543A P:18.27W PF:0.5968 Freq:50.00Hz Lamp Flux:758.843x1 lm		
NAME: SP-PZT-R110-3P-RDM-2	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:2025080046
MFR.: TPK OPTOELECTRONIC TECH CO., LTD	SUR.:	Shielding Angle:

Table--1

UNIT: cd

H(°) \ V(°)	-90	-85	-80	-75	-70	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
-90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.64	5.69	8.61	11.5	14.0
-50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44	6.52	12.5	18.4	24.0	28.8	32.4
-45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.91	9.55	17.3	29.8	43.0	55.5	66.3	74.4	79.4
-40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	9.92	21.8	38.2	58.5	78.4	97.4	112	122	128
-35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	10.1	24.6	44.2	69.0	98.3	129	157	182	201	212
-30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.75	24.0	46.5	75.6	111	150	190	228	261	285	297
-25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.44	13.8	34.6	63.4	101	147	199	254	308	353	385	402
-20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.26	27.9	55.6	93.7	143	202	269	340	406	460	494	509
-15	0.00	0.00	0.00	0.00	0.00	0.00	0.10	10.5	31.7	62.0	104	160	228	306	386	461	528	577	603
-10	0.00	0.00	0.00	0.00	0.00	0.00	1.86	20.2	45.7	83.5	134	202	283	376	465	544	619	674	702
-5	0.00	0.00	0.00	0.00	0.00	0.00	2.32	20.3	45.7	82.8	133	200	285	384	480	568	652	720	759
0	0.00	0.00	0.00	0.00	0.00	0.00	7.92	29.2	58.4	100	156	230	325	431	531	626	716	786	822
5	0.00	0.00	0.00	0.00	0.00	0.00	5.39	25.3	51.7	89.2	140	209	297	400	499	593	682	754	795
10	0.00	0.00	0.00	0.00	0.00	0.00	10.2	30.4	58.0	96.5	149	221	309	410	506	596	680	744	775
15	0.00	0.00	0.00	0.00	0.00	0.00	6.29	24.9	48.2	80.7	126	186	261	349	441	523	598	657	687
20	0.00	0.00	0.00	0.00	0.00	0.00	9.68	27.6	49.6	80.9	124	179	246	326	410	482	543	586	605
25	0.00	0.00	0.00	0.00	0.00	0.00	4.23	20.4	38.5	62.9	96.9	141	194	257	325	388	442	482	502
30	0.00	0.00	0.00	0.00	0.00	0.00	5.18	20.0	35.7	56.8	85.8	122	166	215	266	316	359	389	403
35	0.00	0.00	0.00	0.00	0.00	0.00	1.11	12.9	26.4	42.4	63.8	91.2	124	161	199	236	269	293	306
40	0.00	0.00	0.00	0.00	0.00	0.00	0.19	11.2	22.7	35.6	51.8	72.6	96.6	122	147	171	190	205	212
45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.38	14.3	24.6	36.9	51.8	68.7	87.1	106	123	137	148	154
50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	9.89	18.1	27.6	37.5	48.1	59.5	70.8	81.1	89.2	94.8	97.5
55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.09	9.46	16.9	25.0	33.4	41.8	49.8	57.3	63.2	67.3	69.3
60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.63	9.39	15.9	22.2	27.4	32.0	36.2	39.1	41.0	41.5
65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.25	4.11	7.26	10.7	15.2	19.3	22.7	25.3	27.1	27.7
70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.97	4.71	8.01	10.4	12.3	13.5	14.1
75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	1.98	3.72	4.99	5.98	6.67	7.01
80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

H(β) Range:-90 - 90DEG
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SPEC.:	DIM.:	SERIAL No.:2025080046
MFR.: TPK OPTOELECTRONIC TECH CO., LTD	SUR.:	Shielding Angle:

Table--2																	UNIT: cd		
H(DEC) V(DEC)	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	
-90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
-85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
-80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
-75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
-70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
-65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
-60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
-55	17.2	17.5	16.8	15.4	13.5	11.4	9.15	6.60	3.93	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
-50	34.7	34.8	33.2	30.2	26.2	21.9	17.3	12.1	6.84	1.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
-45	81.3	79.5	74.3	66.5	56.8	46.2	35.6	25.5	17.0	9.93	4.41	0.60	0.00	0.00	0.00	0.00	0.00	0.00	
-40	128	123	113	99.2	83.3	66.1	49.6	35.1	24.1	15.5	7.25	0.22	0.00	0.00	0.00	0.00	0.00	0.00	
-35	213	204	187	165	138	111	84.4	61.0	42.1	27.5	15.9	6.10	0.47	0.00	0.00	0.00	0.00	0.00	
-30	295	280	254	220	182	144	109	78.6	53.5	34.5	20.3	8.85	0.04	0.00	0.00	0.00	0.00	0.00	
-25	403	386	355	311	259	205	155	111	76.4	49.6	30.2	15.9	4.25	0.00	0.00	0.00	0.00	0.00	
-20	506	482	439	382	315	246	183	129	87.3	55.7	33.6	17.9	5.28	0.00	0.00	0.00	0.00	0.00	
-15	604	577	528	462	389	310	231	164	112	72.6	44.3	25.0	10.5	0.43	0.00	0.00	0.00	0.00	
-10	695	655	593	515	433	341	249	176	119	76.4	46.1	25.8	10.7	0.00	0.00	0.00	0.00	0.00	
-5	758	718	651	566	478	382	284	201	137	89.2	54.7	31.7	15.1	1.66	0.00	0.00	0.00	0.00	
0	809	758	677	583	486	383	282	199	133	86.2	52.5	30.5	13.7	0.57	0.00	0.00	0.00	0.00	
5	793	751	678	589	495	396	294	209	142	93.7	58.4	35.0	17.6	2.91	0.00	0.00	0.00	0.00	
10	765	719	647	558	466	367	269	189	129	85.0	53.2	32.0	15.1	1.00	0.00	0.00	0.00	0.00	
15	687	654	596	520	436	347	258	184	127	85.4	54.7	33.9	17.5	2.63	0.00	0.00	0.00	0.00	
20	599	568	516	449	372	289	216	153	106	71.8	46.6	29.0	13.3	0.30	0.00	0.00	0.00	0.00	
25	502	480	440	383	321	254	193	141	99.3	68.4	45.7	29.4	14.6	1.13	0.00	0.00	0.00	0.00	
30	400	379	343	294	243	193	148	109	78.3	54.7	37.6	23.8	9.82	0.00	0.00	0.00	0.00	0.00	
35	307	294	269	234	198	160	125	93.8	68.8	49.5	34.8	22.3	9.55	0.18	0.00	0.00	0.00	0.00	
40	210	200	183	161	137	112	88.1	67.4	50.6	37.8	26.8	15.8	3.91	0.00	0.00	0.00	0.00	0.00	
45	154	148	137	123	106	88.2	71.3	56.1	43.3	32.9	23.4	13.5	3.20	0.00	0.00	0.00	0.00	0.00	
50	97.0	93.2	86.6	77.8	67.8	57.5	48.0	39.4	31.5	24.2	16.1	7.05	0.00	0.00	0.00	0.00	0.00	0.00	
55	69.3	67.3	63.5	58.0	51.5	44.4	37.6	31.1	24.7	18.4	11.4	4.47	0.01	0.00	0.00	0.00	0.00	0.00	
60	41.1	40.2	38.5	35.7	32.4	28.5	24.5	20.2	15.3	10.1	3.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
65	27.8	27.1	26.0	24.1	21.8	19.0	15.9	12.4	8.51	5.61	2.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
70	14.3	13.8	12.9	11.7	10.1	8.18	5.92	3.22	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
75	7.14	6.97	6.57	5.99	5.22	4.29	3.20	1.89	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:28.0DEG
Operators:QC1
Test Date:2025-08-06

V(β) Range:-80 - 80DEG
V(β) Interval: 5.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.354
Humidity:83%
Test Distance:8.300m [K=1.0000]
Remarks: